

\$3.50 A Year • 25c A Copy

May 1940

Consumers Union

R E P O R T S



1940 Refrigerators

Men's Shorts

Group Health Plans



You can't tell me those ratings aren't paid for . . . !

Almost every member of Consumers Union has encountered a storekeeper or a clerk who *knew* as incontrovertible *fact* that CU's "Best Buy" ratings are paid for or that some manufacturer got a "Not Acceptable" rating because he refused to pay. By now we are familiar enough with this sort of cynicism to know that most of the people who say such things say them not out of malice. They say them partly because the whole concept of consumer testing organizations is still so new as to be unfamiliar to them, partly because the excesses and deceptions of much advertising have made them suspicious of almost any product information, and partly because, in this racket-ridden age, it seems to them incredible that good ratings would go to the good products and not to the highest bidders.

These people generally mean no harm, but serious harm to Consumers Union can often result from their irresponsibility. Let us state the facts for the record, and enlist the help of CU members in keeping the record straight.

Consumers Union has never received any remuneration of any nature for rating or for not

rating any product or for giving it a good rating or a bad one. Every rating that has ever been made by Consumers Union has been determined by tests, examination or use, or by the unbiased opinion of qualified authorities, and in no other ways. Consumers Union accepts no gifts of samples from manufacturers (it returns them when they are sent) and it will not sell copies of its *Reports* to manufacturers or distributors for promotion use.

Such are the facts. And now a request to CU members: if you ever hear anyone say that he knows that some CU rating has been influenced by some special interest, please ask him to write down what he says and sign his name to it; and then please send us the document. Consumers Union takes full responsibility for the integrity of its work. We

think it is fair to ask anyone who impugns that integrity to assume responsibility for doing so, and the consequences thereof, too.

This is one of a series of statements clarifying the work and purposes of Consumers Union.

CONSUMERS UNION OF UNITED STATES, INC. is a non-profit organization chartered under the Membership Corporation laws of New York State and deriving its income from the fees and small contributions of its members. It is sponsored by more than 70 educators, social workers, authors and scientists (names on request). It has no connection, direct or indirect, with any commercial interest and accepts no advertising for any of its publications.

CONSUMERS UNION REPORTS is published monthly in full and abridged form. The Full Reports contains ratings and discussions of higher-priced commodities, as well as much general material, not covered in the Abridged. All members receive along with the Reports an Annual Buying Guide (Full or Abridged)—a compact booklet rating more than 2,000 products.

MEMBERSHIP FEES are \$3.50 a year, including subscription to the Full Reports and Buying Guide; \$1.50, including subscription to the Abridged Reports and Buying Guide. Foreign and Canadian memberships are 50c higher to cover postage and exchange. Reduced rates are available for groups (students, trade union members, cooperatives, consumer clubs, etc.). Library rates are \$3 per year (without Buying Guide). Notice of change of address should be given three weeks in advance (please give old address).

CORRESPONDENCE should be addressed to Consumers Union, 17 Union Square West, New York City. CU regrets that time does not permit answering of inquiries for special information or requests for advance test data.

Birthday and a Question

THIS month the *Reports* is four years old, going on five. Forty-six issues stretch back into the mists of time, and this one—the forty-seventh—breaks upon a world that is full of sound and fury. How far away is the Spring of 1936, when the first tests on Grade A and Grade B milk were manifestly the biggest news of the decade, and nobody in particular, except the occupants of CU's one-room office, was paying much attention to them, nor to any of the other first tests.

You'll forgive an old man's reminiscing; it comes back to us now how our best friends didn't want to speak the thought that was in their minds, which was that CU would languish and die before the year was out; and how those few who spoke of a further-reaching future were listened to avidly but with a coloration of bitter doubt; and how the first issue of the *Reports* came and went to fewer than 4,000 members.

In 1936 there were no offended business groups to accuse us of living fatly off of the Moscow gold that somehow never arrived. And whole issues of trade papers were published, and whole advertising conventions were held, without a line being written or a word being spoken about how CU was trying to overthrow capitalism.

In 1936 CU was busy making alliances with a far-flung subversive sect—electrical engineers in universities, chemists in government bureaus, physicians, physicists, and other technical specialists dedicated to the revolutionary program of making science serve the consumer. Blind to these dark doings, the *New York Times* and other pillars of the free press let CU buy space in their columns to speak out directly to the people, urging them to beware of shoddy merchandise and wild advertising claims, inflaming them with the cry, "Get your money's worth!"

But these days soon passed. The free press discovered that science and advertising were sometimes running into conflict in its pages and the free press chose the advertising. In the marts of trade, angry voices told scandalized ears that science was not even observing the sanctity of brand names, and the word went out that a cloud no bigger than a man's hand was blowing up a storm to overthrow the system. And aggrieved brand name owners looked upon the cloud and called it Red, and well-oiled publicists ran to print with storm warnings.

Now we are four, going on five, and 85,000 members of CU and their families and many of their friends will read this issue. The size of this cross-section of America is one of the principal reasons why angry voices have been raised against CU: it has been growing big enough to carry weight. But it is also the reason why quieter voices are just now beginning to show signs of prevailing upon the angry ones: it is growing too big to be frightened with bogeymen.

We do not know for sure whether the quieter voices will prevail nor, if they do, just what they will have to say. But we offer the suggestion that they might profitably find meat for whatever they say from a contemplation of one question: "If business and advertising were fulfilling their obligations to consumers, would Consumers Union now be starting its fifth year? Would the whole consumer movement be developing and growing as never before?"

It is a question of a type that the angry voices never did get around to answering.

REPORTS & CONSUMER NEWS IN THIS ISSUE



The purposes of Consumers Union, as stated in its charter, are "to obtain and provide for consumers information and counsel on consumer goods and services . . . to give information and assistance on all matters relating to the expenditure of earnings and the family income . . . to initiate and to cooperate with individual and group efforts seeking to create and maintain decent living standards for consumers."

TECHNICAL REPORTS

Men's Shorts: With Ratings of 15 Brands	5
Refrigerators: Test Results on New Models	7
Metal Polishes for Household Use	11
Canned Tomato Soups: Taste Tests	14
Sanitary Pads and Tampons	15
Some Advice for Amateur Fishermen	17
Canned Beans: Price & Quality Ratings	18
Knitting Yarns: Some Buying Guidance	19

MEDICAL REPORTS

Thyroid and Iodine	21
Vitamin C	22

NEWS AND INFORMATION

CU's Fourth Annual Meeting	24
Interstate Trade Barriers	25
Group Health, by Dr. Kingsley Roberts	26
Your Telephone Bill, by Moritz Howard	30
War & Prices: A Guide for Consumers	34

DEPARTMENTS AND FEATURES

The Docket: Government Actions	20
There Ought to be a Law	28
Consumers at Work	29
Quote Without Comment	35

ARTHUR KALLET

Director

D. W. MASTERS

Publications Director

OFFICERS: Colston E. Warne, *President*; William M. Malisoff, Robert A. Brady, James Gilman, *Vice-presidents*; Adelaide Schulkind, *Secretary*; Bernard J. Reis, *Treasurer*.

BOARD OF DIRECTORS: Harold Aaron, Hartley W. Cross, Jerome Davis, Osmond K. Fraenkel, A. J. Isserman (*Counsel*), Arthur Kallet, Paul J. Kern, William M. Malisoff (*Special Technical Consultant*), George Marshall, Mark Marvin (*Staff Representative*), Dexter Masters, Kathleen McInerney, A. Philip Randolph, Bernard J. Reis, Adelaide Schulkind, Colston E. Warne, Goodwin Watson.

STAFF TECHNICIANS: Robert Dunbar, Ferd. Mann, Gifford McCasland, Madeline Ross, Sidney Wang.

EDITORIAL STAFF: Dorothy Kiel, Mark Marvin (*Labor*), Rachel Lynn Palmer (*Legislation*), Gordon Sager, Vernon Smith.

MAY 1940

VOL. 5, NO. 5

Consumers Union Reports is published monthly by Consumers Union of United States, Inc., at North Broadway, Albany, N. Y. Entered as second-class matter June 1938 at the postoffice, Albany, N. Y., under the act of March 3, 1879. Copyright 1940 by Consumers Union of United States, Inc.



Consumers Union Reports is Prepared and Edited Under Union Conditions by Contract With the Book and Magazine Guild.

The Fourth Annual Meeting

THE combined fourth annual meeting and the consumer conference announced on page 24 of this issue is, we feel, an event of great potentialities. We do not know whether this expanded meeting will be a forerunner of other meetings of the same type, although that is an obvious possibility. And we do know that the direction in which this conference-meeting leads is the way to a broadening of consumer education and consumer group activity, which must be implicit in the future growth of the consumer movement as a whole.

But perhaps we are allocating too responsible a role to a get-together which has not yet happened and which is still half-rooted in the plans-and-preparations stage. The main purpose of this editorial note is to call special attention to the broad and vital fields of interest represented by the speakers who have already accepted (more will be announced later), and to urge as many CU members as possible to come and sit in on the proceedings.

At the same time we want to record credit where credit is due. This conference is not just of CU's making. Full partner in the undertaking is the Boston-Cambridge branch of the American Ass'n of Scientific Workers, an organization of some of the nation's most eminent and progressive scientists and educators. CU has been fortunate in having the helpful cooperation of members of this organization in the development of its technical work for some months past. We wrote about this relationship in the January Reports. We count ourselves fortunate again in sharing with them the sponsorship of this new venture.

The Governor Vetoes

IT TOOK the Governor of New York State 31 days—the full limit of the time allotted him—to make up his mind that the Ryan-Stephens bill, designed to prevent the introduction of single-grade milk into New York City, was “not clear.” End of last month he vetoed it.

The stage is now set for the establishment of single-grade milk in New York City. Although the public hearings held

by the Board of Health on April 22 took up the question of whether there should be a single grade, it is generally conceded, even by the most rabid opponents of single-grade milk, that the question is pretty well settled. All that remains is the establishment of standards for that grade, and it is on those that the Board of Health is working.

Chief surprise of the hearings was the harmonious approach to the once hotly discussed issue of standardization—which means, in the case of milk, the practice of subtracting either cream or skim milk from whole milk to bring it to a predetermined butterfat level. Strangely enough not a single voice spoke for standardization. Consumers, producers and distributors who discussed it all spoke in opposition.

In view of this unanimous stand against a practice which could permit endless tampering with New York's milk supply, there would seem to be every reason for the Board of Health to decide once and for all not to legalize standardization. CU trusts that it will so act.

Words in Missouri

IT HAD been our fond hope to give in this issue a summary of the proceedings of the Second National Conference on Consumer Education, held at Stephens College last month, as a follow-up to our editorial comments on the Conference in the April Reports. Space—as much at a premium as ever, despite our recent addition of four pages—put a stop to it. We now fondly hope to run some excerpts from some of the speeches in the next issue—if space permits.

Meantime, we give you two revealing little incidents of the Conference. One can be told in dialogue taken from a round-table discussion on “Consumer and Business Relations”:

Paul Willis (President of the Associated Grocery Manufacturers of America): “The manufacturer wants a bridge that he can walk back and forth on between grade labeling and ‘descriptive’ labeling. Some foods lend themselves to one; some to the other.”

Question from the floor: “Will Mr. Willis name some foods that don't lend themselves to grade labeling?”

Mr. Willis: “I am not here to do that kind of thing.”

The other incident occurred when Mrs. Sadie Orr Dunbar, president of the General Federation of Women's Clubs, read to the Conference the joint program of the Federation, the American Ass'n of University Women and the American Home Economics Ass'n. Some of the business leaders present chose to doze through the better part of this, and the fact neither escaped nor pleased Mrs. Dunbar. Said she:

“You thought that statement I just read wasn't very important. Well, it was important, if you are here to do what you say you want to do. And you should have listened. I've heard enough of this love fest. I'm tired of this ‘You scratch my back and I'll scratch yours.’ We consumers don't want that. We want your serious consideration of our problems.”

Generally approved by the consumer educators present was this slap at businessmen who flirt coyly with the consumer movement, ignore its meaning and aims. Significantly enough, the slap got further approval from some of the businessmen themselves.

Reports in Progress

Work on the following reports, among others, is either now under way or scheduled to begin shortly:

WITH PRODUCT RATINGS

Exposure Meters

Talcum Powder

Carbonated

Beverages

Pipe Tobacco

Grapefruit and

Tomato Juice

Laundry Soap

Electric Fans

Portable Radios

Shower Curtains

WITHOUT RATINGS

Men's Summer

Suits

Wood Furniture

TECHNICAL SECTION

OF CONSUMERS UNION REPORTS

Ratings of products represent the best judgment of staff technicians or of consultants—more than 200 specialists selected for competence and freedom from commercial bias—in university, governmental and private laboratories. Samples for test are in practically all cases obtained on the open market by CU's shoppers. Ratings are based on laboratory tests, carefully controlled use tests, the opinion of qualified authorities, the experience of a large number of persons, or on a combination of these factors. Most ratings of necessity reflect opinion as well as scientific data. For even with rigorous tests, interpretation of findings is often a matter on which expert opinion differs. It is Consumers Union's pledge that such opinions as enter into its evaluations shall be as competent, honest, and free from bias as it is possible to make them.

"Best Buys" should give greater return per dollar although some products rated "Also Acceptable" may be of higher quality. Except where noted, a product rated "Not Acceptable" is judged not worth buying at any price, because of inferior quality or because it is potentially harmful.



Men's Shorts

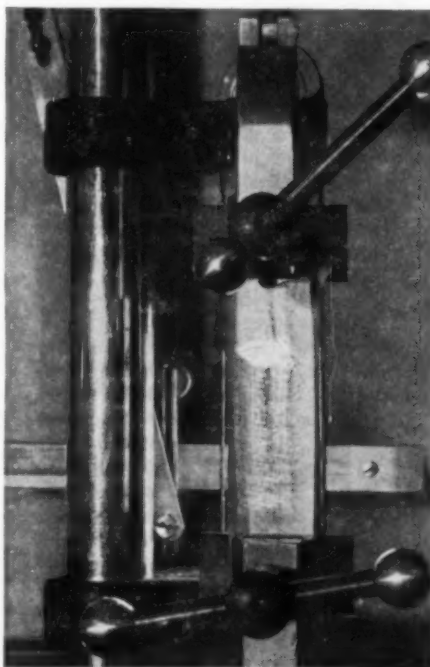
The "Best Buy" out of 15 brands tested is Schulte's; Wilson's, highest on a quality count alone, costs about twice as much

IT SEEMS a trifle odd, in this age of frantic specialization, that the "Best Buy" out of 15 brands of men's shorts tested by CU's technicians was found in a cigar store. On a price and quality basis, *Schulte's* shorts ranked first, and only a few points below *Wilson's*, which received the highest rating on quality alone but cost about twice as much.

Although men's shorts advertisements make much of "banjo shorts," of "racket," or "balloon," or "parachute" shorts, these terms as used in the advertisements are merely imaginative descriptions of the various types of seat construction used by different manufacturers. (Mostly the construction resembles roughly the shape of a table tennis paddle, eliminates seams down the center of the back, and provides—if properly cut—some measure of fullness.)

All these fancy terms are intended to impress consumers with the fact that this or that brand of shorts is more comfortable and durable. Surely there are no more important consid-

erations than these; and it was on them that CU mainly based its tests. Shorts should be full-cut and



CLOSE-UP

... of the photograph on the cover. In this way did CU's technicians test for tensile strength of the fabrics

roomy; they should not have rough seams particularly at the seat or crotch, where the seams might be irritating. And, whether the seat section be banjo-shaped, hourglass, or just plain rectangular, the shorts should meet the correct specifications for size both before they are laundered and afterwards. The fabric itself must be durable enough to withstand many launderings, and the color must, of course, be fast.

There are standard minimum measurements (promulgated by the Underwear Institute in cooperation with the National Bureau of Standards) for each size and type of men's shorts. A garment not in general agreement with these dimensions may not be comfortable. Some brands, where one measurement is smaller than the standard but is compensated for by an increase in another measurement to fit a particular construction, are satisfactory if the all-round measurements meet the accepted standards.

The fabrics most often used are cotton prints, solid and woven pattern broadcloths, and madras. Less common are sateens and oxfords. In the lower-price groups, cotton prints are used almost exclusively, with the exception of a few solid-color broadcloths and—in private label merchandise—some woven stripe fabrics. CU found no woven patterns in nationally advertised brands at prices lower than 50¢.

Since woven shorts must be of fabric strong enough to withstand strain in wear and during washing, a good broadcloth or madras is preferable to a print cloth. Advertisements may make much of crotch reinforcements, but these, although desirable, do not strengthen the fabric in other parts of weak-fabric shorts.

Colorfastness does not seem to be much of a problem in most men's shorts. Usually the colors, which are vat-dyed, do not fade or stain in washing, although some of the more brilliant colors (as in blazer-striped shorts) may run and stain other lighter-colored garments being washed at the same time.

In CU's laundry tests, the color in *B.V.D.* shorts ran in the first washing, but the shade itself showed no fading, and if washed alone should be satisfactory. *Foreman & Clark* solid green and blue broadcloth shorts faded ex-

A note on the labor conditions under which men's shorts are manufactured will be found on page 29.

cessively and stained other garments washed with them. All of the other shorts tested, from the 25¢ prints to the 65¢ broadcloth, were found to have satisfactory colorfastness with ordinary laundering methods, using hot water and regular laundry soap chips.

Choice of waistband construction seems to be more a matter of individual preference than anything else. Shorts are available with elastics either at the sides or the back, either exposed or concealed within the the fabric; non-elastic types have either a French back, with adjustable button tabs, or tie sides, with drawstrings for adjustment. In general, shorts with the French back or the tie sides seem preferable, since elastics may lose their elasticity before the fabric itself is worn out or the pressure they exert on the waist may possibly be found annoying.

In most of the garments tested, front fastening was accomplished either by synthetic plastic buttons, pearl buttons, or snap fasteners. Tests indicate that synthetic buttons are more satisfactory than the usual grade of pearl buttons found in men's shorts, and that snap fasteners are more satisfactory than either. The Gripper type of fastener, found on a number of shorts, is rust-resistant and so well attached to the garment that it should last as long as the fabric itself without the maintenance trouble so frequent with buttons.

As in any other garments, shoppers should look for details of good workmanship: clean, evenly spaced stitching, well-made buttonholes, reinforcing at points of strain. Hems should, of course, be ample, not skimpy; all raw edges should be concealed behind the seams.

In the following ratings, dimensions, shrinkage, fabric strength and workmanship are considered of prime importance. Waistband construction (primarily a matter of personal preference) and colorfastness (which was generally satisfactory) are not considered in the ratings.

At least four samples of each brand were tested, and, wherever possible, each type of fabric within each brand was included in the tests. Ratings are based on an average of the samples under test.

Best Buys

Schulte (Schulte Cigar Stores). 29¢; 4 for \$1. Cut full, with no appreciable shrinkage. Gripper closures. Good tensile strength. Seam near center of crotch may chafe. Fourth in order of quality.

Fruit of the Loom (Union Underwear Co., Frankfort, Ky.). 27¢; 4 for \$1. Cut full, with no appreciable shrinkage. Synthetic button closures. Good tensile strength. Sixth in order of quality.

Wiltshire (F. & W. Grand Stores). 25¢. Cut full, with no appreciable shrinkage. Fabric had good tensile strength. Pearl buttons. Seventh in order of quality.

Also Acceptable

(In order of quality without regard to price)

Wilson (Wilson Bros., NYC). 50¢. High-count fabric, with good tensile strength. Cut full, with no appreciable shrinkage. Pearl buttons or Gripper closure.

Manhattan (Robert Reis & Co., NYC). 55¢. Good-strength fabric. No appreciable shrinkage.

Arrow (Cluett, Peabody & Co., NYC). 65¢. High-quality fabric with good tensile strength. No shrinkage. Gripper closures. Shorts with elastic were found slightly skimpy in waist.

Correction

THE formula for computing interest rate which appeared on page 8 of the February issue of the *Reports* may have been confusing to many readers. The formula was correct only for one year and required modification for payments covering any period other than 12 months.

The complete formula, given in *Consumers' Guide*, February 13, 1939, as being correct "for all practical purposes," is:

$$\text{Rate per year} = \frac{2 \times m + I}{B(n+1)}$$

Here, "m" is the number of payments in one year (for monthly payments "m" is 12; for weekly payments, 52); "I" is the total carrying charge, or interest, in dollars (obtained by subtracting the total cash price from the total cost on the installment plan); "B" is the unpaid balance at the beginning of the credit period (the cash price less the down payment); "n" is the total number of payments, not counting the down payment.

It should be noted, in figuring interest rate on installment purchases, that the amount of indebtedness decreases with each payment. Sellers do not always make this clear.

Sunlan¹ (New York Hat Stores, Los Angeles; San Francisco). 59¢; 2 for \$1.10. Shorts were well cut. Showed slight shrinkage, but not excessive. Fabric had good tensile strength. Gripper or pearl button closures.

Varsity (Varsity Underwear Co., Baltimore). 50¢. Fabric had well-balanced count and good tensile strength. Shrinkage was quite high but not excessive. Extra large cut kept laundered garment within standard size.

Mansco (Manhattan Shirt Co., NYC). 50¢. Fabric had high count and good tensile strength. Gripper or synthetic button closures. Shrinkage was variable in different samples but not excessive. Cut and fit satisfactory.

B.V.D. (B.V.D. Co., NYC). 50¢. Fabric had high count and good tensile strength. Brightly colored stripes bled in first washing and may stain lighter-colored garments washed with them. Fit was satisfactory and shrinkage negligible. Gripper closures.

Otis (Otis Underwear, NYC). 3 for \$1. Fabric had good count. Filling tensile strength low. Fit was satisfactory and shrinkage low. Gripper or pearl button closures.

Foreman & Clark¹ (Forman & Clark, Los Angeles; San Francisco). 50¢. Fabric had good count and tensile strength. Shrinkage was excessive, but extra cut brought laundered garment within standard size. Two solid-color broadcloths tested—green and blue—faded excessively in laundry, and stained other garments. Gripper and pearl button closures.

Otis. 50¢. Good count and tensile strength. Shrinkage was excessive, but extra cut brought laundered garment within standard size. Gripper and pearl button closures.

Not Acceptable

Woolworth (F. W. Woolworth Stores). 25¢. Tensile strength and count were good, but shrinkage was high. Garment was cut small and additional loss in laundering brought it 8% below standard size.

Reis (Robert Reis & Co.). 55¢. Fabric showed good count and tensile strength. Garment was cut small and shrank excessively.

Sunlan¹ (New York Hat Stores). 3 for \$1.10. Tensile strength and fabric count were good, but garment was cut small and shrinkage was excessive.

B.V.D. (B.V.D. Co.). 3 for \$1. Tensile strength and count fair. Garment was cut small and fabric shrank excessively.

Topkis (Topkis Bros.). 25¢. Tensile strength and count fair. Garment was cut small and fabric shrank excessively.

Otis (Otis Underwear). 29¢; 4 for \$1. Tensile strength and count fair. Garment was cut small and fabric shrank excessively.

¹ Available in West only.

The 1940 Refrigerators

... will cost the consumer less than any of their predecessors—thanks to a price war which got out of hand. Except for gadgets, there are no noteworthy changes over last year's models

ONE war the consumer may rejoice in is the current refrigerator price war, which has brought the prices of electric refrigerators down to the lowest figure in refrigerator history; down, as a matter of fact, to about \$20 lower than even manufacturers had intended. Hostilities started in January when Kelvinator opened fire with a six-cubic-foot refrigerator for \$119.95. This *Blitzkrieg* confounded the entire industry, for it took place just as General Electric, Frigidaire, and Westinghouse—who usually set prices for the industry—had announced models at \$129.50 to \$134.50.

Frigidaire deliberated for more than a week, then cut its price to \$112.75, which most manufacturers (except Kelvinator) met a few days later. Kelvinator maintained its \$119.95 price until March when it raised the price of this model to \$124.95 and announced a new model for \$114.75 to re-enter the price war it had started. The new model apparently was the \$119.95 one dressed up to look a little different.

As the specifications indicated and as CU found in its tests, these refrigerators were little different from those selling for \$150 last year and for \$180 to \$190 the year before. The difference was in the direction of better construction and more efficient operation in most cases. CU's standard NEMA tests conducted on the new 1940 models keeps the brands in almost the same relative order as the 1939 models. Norge lost first place held last year because poor cabinet sealing should make it more expensive to operate in hot humid climates than others in the "Best Buy" group, even though it used the least energy under normal conditions. Crosley dropped behind Frigidaire and Kelvinator because of higher operating costs. Substitution of glass-wool insulation instead of corrugated paper in the Westinghouse make it a better refrigerator than last year's model.

A note on labor conditions in the refrigerator industry will be found on page 29.

All models tested by CU were the lowest-priced six-cubic-foot boxes available. Results indicate that consumers need pay no more than the minimum for a refrigerator that will provide reliable and economical refrigeration for the average-sized family. A table of higher-priced refrigerators of the

AIR CONDITIONING & REFRIGERATION NEWS

One reason for all this feverish-in-advance-of-the-season activity is the somewhat common opinion held by scores of dealers that prices will climb back up later this season. (It would not be surprising to find that some quota-bent field men were supporting and even spreading this supposition.) This opinion, however, is not shared by the informed.

An interesting phenomenon is the "inability" of manufacturers to make shipments of the lowest-priced boxes. Hundreds of dealers are reporting to prospects that they are temporarily "sold out" of the rock-bottom jobs. Shipments are exceedingly slow in arriving from the factories. This fact forces them to "sell up" to the higher-priced boxes.

same make and size is included with this report. Although somewhat greater convenience and better appearance accompany higher prices, such prices add much more to manufacturers' profits than to consumer value. The basic refrigerator is the "Best Buy"; added gadgets are "Also Acceptable."

Naturally, manufacturers do not want to sell refrigerators at this low price if they can sell higher-priced boxes. What they call their *regular* six-foot boxes range in price from \$149.50 to \$154.50, with the so-called "fully equipped" boxes of the same size ranging \$25 to \$50 higher. That manufacturers and dealers regard the cheaper models largely as bait to bring the consumer into the store is apparent from almost any issue of the refrigerator trade magazines. Once in the store, they hope to "sell" him on the higher-priced models.

Because of this attitude on the part of retailers, the consumer himself is often forced to become almost belligerent if he wants to buy one of the lowest-priced models. Factory schedules may be behind on these models and it may take weeks for the purchaser to get delivery.

As a matter of fact, Kelvinator is so proud of its dealers, who are selling mostly the higher-priced models, that it boasts of it in a double-page advertisement in the March 27 issue of *Air Conditioning and Refrigeration News*. "COMPARE THE FACTS!" says Kelvinator. "Sales Are Better Where Margins Are Better . . . Thanks to Kelvinator's Sensationally Successful Step-Up Plan. 79.8% of Kelvinator Dealers' Business Is In Refrigerators

Here's your new Frigidaire
**BETTER THAN EVER
FOR LESS THAN EVER!**



**NEW design NEW low prices
NEW convenience features**

Yes, it's real news! These big beautiful Frigidaires are priced lower than ever before in refrigerator history! They're the real "best buys" you've ever seen! You can save a lot of money! These Frigidaires are really great! \$100!

TRADE FACTS & COPYWRITER'S FANCY

Frigidaire, like other manufacturers, touts the lowest-priced box. But most manufacturers—as the trade-paper clipping shows—do their best to make consumers buy the more expensive models



HANDY GADGET

... is Westinghouse's new, easy-to-manipulate door handle

From \$139.95 and Up! ... 79.8% of the Kelvinator Volume is in refrigerators with the greatest margin. ... But the March 20 issue of the same publication points out sternly that electric utility companies, by really selling the lower-priced refrigerators, are offering formidable competition to regular dealers.

Utility companies want to sell more appliances in order to increase the amount of electricity in use and see in low-priced refrigerators an opportunity to sell to lower-income groups that have not previously owned electric refrigerators. Their profits come out of the electric energy the new box will use, while the dealers' profits must come out of the refrigerators themselves. The moral to the consumer is that if his regular appliance dealer does not want to sell him a low-priced refrigerator his utility company does.

Among the many explanations for the price war is that the lower prices come closer to those of mail-order refrigerators. The two large mail-order houses, with refrigerators priced considerably lower than standard boxes, have become a big factor in the field. The price war, therefore, must have been an unpleasant surprise to Sears-Roebuck and Montgomery Ward, for price alone is no longer an incentive to buy a refrigerator by mail. In fact, on the basis of CU's tests it is better to buy one of the nationally advertised brands.

AS FAR as new developments go, Frigidaire has enlarged on its *Cold-Wall* line, but other manufacturers have not followed suit with similar changes.

Higher-priced models of several makes still use the conventional compressor and cabinet, providing a high humidity compartment as an addition to the refrigerator rather than as a built-in feature, like the *Cold-Wall*. These compartments have various names—"Moist Master," "Humichest," "Humi-dial," &c.—but essentially they are all simply closed compartments which confine the moist air. Food in these compartments does not dry out, but food in any closed dish will also remain moist. In that sense, these special compartments are merely gadgets for which the consumer is expected to pay a high price; CU finds that, like Frigidaire's *Cold-Wall*, for the average consumer they are not worth the price.

Higher-priced refrigerators also

Prices

ALL prices given in the introductory material, in the accompanying charts, and in the ratings are those prevailing in the lowest-price zone. With most refrigerators, this zone is in the Detroit area, and prices (of the models CU tested) would be up to \$2 higher for the East Coast, up to \$7 higher for the West Coast.

All prices given are those prevailing April 1.

feature larger freezing compartments intended to provide additional storage space for frozen foods. Here, too, the addition hardly seems worth the great increase in price over the so-called "stripped" models selling at the minimum price, unless the purchaser plans to use a large amount of frozen foods.

No gas refrigerator was tested. CU's tests last year indicated that the gas refrigerator, with its higher price and, in most areas, higher operating cost, could not compete with the modern low-priced electric refrigerator. Purchase of a gas refrigerator would be justified only where electricity is not available or where gas is very cheap or free. In any event, the consumer has no choice in selecting a gas refrigerator, since the only one available is the *Electrolux*, manufactured by Servel, Inc., Evansville, Ill. Gas companies often sell them for considerably less than list price.

The following points may be of help in the purchase and operation of an electric refrigerator. The opinions reflect the best knowledge of CU's consulting and technical staff based on CU's tests of refrigerators during the past four years.

Safety

Shock Hazard. All refrigerators were tested for shock hazard by measuring current leakage and by determining the voltage at which insulation broke down. The maximum current leakage considered permissible was .2 milliamperes at 115 volts. Insulation which will not withstand a voltage of 1,000 is considered unsatisfactory. (The voltage which insulation can withstand is not only an indication of shock hazard, but also of the general durability of the insulation.)

All of the refrigerators tested were satisfactory on both counts. Prolonged operation of any refrigerator in a very humid atmosphere, however, may permit more current leakage than is considered safe. When refrigerators are operated under these conditions, the metal parts of the cabinet should be grounded.

Poisonous Fumes. Of the three types of refrigerant in general use, sulfur dioxide is poisonous, but has a warning odor; Freon and F-114 are non-poisonous, but decompose into

poisonous gases in the presence of a flame. The accompanying statistical table lists the type of refrigerant in use in the brands tested by CU this year.

Danger of leakage of the refrigerant is small in the sealed compressor generally used. In the unsealed compressor (used in *Ward's* and *Sears'*), the refrigerant may leak if the box is disconnected and special precautions are not taken. Not only is this a hazard, but if much of the refrigerant leaks out, the refrigerator will operate inefficiently. A refrigerator with an unsealed compressor must either be left running if the owner is away for an extended period of time, or it must be disconnected by a serviceman, who will pump down the refrigerant and shut off the valve before the electricity is turned off.

Performance

Ice Cubes. Refrigerators that make a large number of ice cubes quickly may be otherwise inefficient and expensive to operate; likewise, refrigerators that take a very long time to make ice cubes may not be efficient. In CU's

tests, those that made ice cubes in from six to 10 hours at a room temperature of 90° F. were found the most efficient generally.

Economical Operation. Refrigerators operate most efficiently when their condensers are kept clean. (The condenser is the arrangement of tubes and fins behind the motor in all models CU tested, except for the new *GE* where the condenser is a large flat plate in back of the cabinet. Before cleaning the conventional condenser, be sure to remove the refrigerator plug from the electrical outlet. Ease of cleaning the condenser is discussed in the ratings below.) The freezer also should be defrosted regularly, since too great an accumulation of frost prevents efficient conduction of heat from the inside of the box to the refrigerator.

Size. CU's tests were conducted on six-cubic-foot refrigerators. This size seems best for the average family. Little or no economy will be realized with refrigerators of smaller size, since food spoilage is high in overcrowded boxes. On the other hand, refrigerators with a larger capacity than six feet usually consume more electric energy

and should be purchased only if the extra space is needed.

Insulation. Insulation in a refrigerator, to be satisfactory, must not only prevent conduction of heat but also must resist absorption of moisture, since such absorbed moisture decreases the effectiveness of the insulation and results in an increase in the amount of electricity the refrigerator uses. Over a period of years, especially in very humid climates, this factor can be extremely important; in dry temperate climates it is less so. Of the insulating materials now in use (see accompanying table on technical data), Dry Zero, glass wool, and mineral wool are considered most moisture-resistant.

Construction

Sealing. Although it has so far been impossible to make the walls of a refrigerator completely airtight, the external joints in all 1940 models tested by CU, except the *Norge*, were tight enough to prevent free entrance of moisture. Refrigerators are now being manufactured with small openings between the food compartment and the insulation. These openings are con-

Technical Data on 1940 Electric Refrigerators

(In estimated order of quality)

BRAND AND MODEL	PRICE (\$)	NET STORAGE SPACE (CU.FT.)	INSULATION	TYPE OF COMPRESSOR	REFRIGERANT	COMPARATIVE CONSUMPTION OF ELECTRICITY (KWH PER DAY)	COMPARATIVE OPERATING COST PER MONTH (\$)
<i>General Electric LB-6B-40.</i>	112.75	6.1	Corrugated paper	Sealed reciprocating	Sulfur dioxide	.62	.93
<i>Westinghouse LS-6-40.....</i>	112.75	6.0	Glass wool	Sealed reciprocating	Freon	.68	1.02
<i>*Hotpoint 120EA63-40.....</i>	112.75	6.1	Corrugated paper	Sealed reciprocating	Sulfur dioxide	.62	.93
<i>Norge AR-6A.....</i>	112.75	6.2	Dry Zero	Sealed rotary	Sulfur dioxide	.53	.80
<i>Frigidaire SVS6-40.....</i>	112.75	5.9	Glass wool	Sealed rotary	F-114	.87	1.31
<i>Stewart-Warner 610.....</i>	112.75	6.0	Balsam wool	Sealed reciprocating	Freon	.84	1.26
<i>*Kelvinator CSX-6.....</i>	114.75	6.4	Corrugated paper	Sealed reciprocating	Freon	.89	1.34
<i>*Leonard LCSX-6.....</i>	114.75	6.4	Corrugated paper	Sealed reciprocating	Freon	.89	1.34
<i>Crosley MW9-60.....</i>	99.95	6.3	Mineral wool	Sealed reciprocating	Freon	1.19	1.79
<i>Sears' Coldspot — 3966.....</i>	99.50 ³	6.5	Mineral wool in cabinet; organic mass in door	Open rotary	Sulfur dioxide	.97	1.46
<i>Ward's—A64.....</i>	94.50 ³	6.2	Mineral wool in cabinet; corrugated paper in door	Open reciprocating	Freon	1.37	2.06

* Not tested this year.

¹ Estimated by averaging no-load test performance at 70°F., and 90°F., standard NEMA test conditions; figures are comparative only—actual energy consumption will vary widely depending on conditions of use. ² At 5¢ per kilowatt hour. ³ Plus shipping charges.

1940 Refrigerator Comparison Table

THE following table lists refrigerators using a refrigerating unit and cabinet with specifications similar to those of the models tested. Cost of operation of each model should be equivalent to that of the test model. Higher-priced models have additional equipment, such as humidifiers, fruit baskets, dishes, water bottles, meat keepers, &c. Some have porcelain exteriors and more elaborate trimming.

The first model of each group is the one rated in this report.

BRAND	MODEL	PRICE (\$)	BRAND	MODEL	PRICE (\$)
Crosley	MW9-60	99.95	Norge	AR-6A	112.75
	MLA9-60	119.95		VR-6A	139.95
	MA9-60S	139.95		VR-6AP	159.95
	MB9-60	149.95		MR-6	179.50
Frigidaire	SVS 6-40	112.75		DR-6	199.50
	Super Value	6-40	127.50	SR-6	229.50
	Master	6-40	157.50		
	De Luxe	6-40	187.00		
General Electric	LB-6B-40	112.75	Sears' Coldspot	3966	99.50
	LB6-40	134.75		4046	89.95
	JB6-40	169.75		4056	100.00
	B6-40	209.75		4066	112.75
	PB6-40	234.75		3393	114.50
			4096	129.50	
Hotpoint	120EA63-40	112.75	4016	149.50	
	120EA6-40	137.75	Stewart-Warner	610	112.75
	120EB6-40	167.75		620	139.95
	120EC6-40	207.25		640	169.95
	120ED6-40	231.50		670	199.95
Kelvinator	CSX-6	114.75	Ward's	A64	94.50
	SS-6	124.95		A65	94.50
	S-6	139.95		604	107.50
	HS-6	169.95		605	107.50
	R-6	179.95		624	137.50
	HD-6	209.95	625	137.50	
Leonard	LCSX-6	114.75	Westinghouse	LS-6-40	112.75
	LSS-6	124.95		S-6-40	137.75
	LS-6	139.95		H-6-40	172.75
	LHS-6	169.95		A-6-40	197.75
	LR-6	179.95		D-6-40	217.75
	LHD-6	209.95		E-6-40	227.75

sidered desirable, to permit the moisture that does collect in the insulation to escape. Since the air in the food compartment is relatively dry (moisture in it is deposited as frost on the evaporator), a drying-out process of the insulation takes place through the small openings.

Finish. Interiors of all refrigerators tested were porcelain. Reasonable care must be exercised with these, since porcelain will deteriorate, change color, and become porous if acid spilled on it is allowed to remain. Fruit juices spilled on the floor of the cabinet should be washed up immediately, preferably with a solution of baking soda. Exteriors of all models tested were covered with baked synthetic finishes, much more durable than former lacquer finishes. Only the most expensive models have porcelain exteriors, which endure ordinary wear better than enamels, but chip if severely misused.

10 • Technical Section

Compressors. Refrigerator compressors are either rotary or reciprocating (see accompanying table), and either is satisfactory if it is well constructed. Of the three refrigerators with rotary mechanisms tested, one rated first in economy, and another third from last. All other models had reciprocating compressors.

Gadgets

Water bottles, humidifiers, special meat compartments, door racks, &c., can all be useful—if they do not clutter up the refrigerator too much and interfere with the free circulation of air, and if they do not cut down, rather than increase as manufacturers claim, the usable space of the refrigerator. But they are not worth \$50 to \$100 more than the “ungadged” refrigerators to most consumers. On the so-called “stripped” models CU tested, there were such conveniences as in-

terior lights, ice tray lifters, and easy-opening latches, which were the high-priced gadgets of just a few years ago.

Ratings

Current models of the three brands indicated by an asterisk below were not tested this year; ratings of them are based on previous CU tests and on current data available to CU. New models of *Co-op* and *Philco* refrigerators—planned for inclusion in these tests—were not available at the time the tests were started.

Best Buys

General Electric LB-6B-40 (General Electric Co., Bridgeport, Conn.). \$112.75. Operating economy about equal to model rated last year. Corrugated paper insulation in cabinet considered satisfactory for dry and temperate climates. Condenser is at rear of cabinet where it is easily accessible for cleaning if refrigerator is moved away from wall.

Westinghouse LS-6-40 (Westinghouse Electric & Mfg. Co., Mansfield, Ohio). \$112.75. Rates very close to GE in operating cost and freezing capacity. Glass wool insulation in model tested this year is considered more durable and better for humid climates than corrugated paper in last year's model. Should be most economical of refrigerators to operate in continuously hot humid climate. Door handle is very convenient to operate. To clean the condenser, it is necessary to remove the front of the motor compartment, the temperature controller dial, and a sub-panel.

***Hotpoint** 120EA63-40 (Edison General Electric Appliance Co., Chicago). \$112.75. Essentially similar to GE above, except that condenser is of conventional type in motor compartment and is cooled by fan rather than natural draft.

Norge AR-6A (Norge Div., Borg-Warner Corp., Detroit). \$112.75. Operating economy best of refrigerators tested under normal conditions, but sealing over motor compartment poor enough to increase operating costs in continuously hot humid climates. In dry and moderately temperate climates, energy consumption should remain low. Condenser moderately accessible for cleaning from front of motor compartment. Porcelain of inner liner floor became dull after 48 hours contact with lemon juice.

Also Acceptable

(In estimated order of merit, price considered)

Frigidaire SVS6-40 (Frigidaire Div., General Motors Corp., Dayton, Ohio). \$112.75. Excellent construction, but note (on accompanying table) somewhat higher cost

CONSUMERS UNION Reports

of operation than refrigerators rated above. Freezing capacity low; more than 10 hours required to make ice under test conditions. Air chute at rear of refrigerator must be removed in order to clean the condenser.

Stewart-Warner 610 (Stewart-Warner Corp., Chicago). \$112.75. Operating cost about the same as *Frigidaire*. Freezing capacity low; more than 10 hours required to make ice under test conditions. Air chute at rear must be removed for oiling the fan motor every two years. Condenser cleaned from front by removing outer cover and baffle in front of motor compartment. Porcelain of inner liner was badly dulled after 48 hours contact with lemon juice.

***Kelvinator** CSX-6 (Kelvinator Div., Nash-Kelvinator Corp., Detroit). \$114.75. Essentially similar to model tested last year. This is a special economy model being sold by Kelvinator to compete with other brands selling at about same price, but its specifications are similar to the SS-6 priced at \$124.95.

***Leonard** LCSX-6 (Leonard Div., Nash-Kelvinator Corp., Detroit). \$114.75. Identical, except for trim and nameplate, to *Kelvinator* CSX-6; corresponding model to *Kelvinator* SS-6 is LSS-6.

Crosley MW9-60 (The Crosley Corp., Cincinnati, Ohio). \$99.95. Operating cost of model tested this year much higher than last year's test model. Condenser is at rear of cabinet where it is easily accessible for cleaning if refrigerator is moved away from wall. Porcelain of inner liner was dulled and slightly pitted after 48 hours contact with lemon juice.

Sears' Coldspot Cat. No. — 3966 (Sears-Roebuck). \$99.50 plus shipping charges. Operating cost better than *Crosley*. Freezing capacity low; over 10 hours required to make ice. Open compressor undesirable—not equipped with valves to permit pumping down refrigerant (see text), but Sears is beginning to supply sealed compressors without changing model numbers or price. Company has not announced this new mechanism, but consumers should insist on a sealed compressor if they purchase a *Coldspot*. Compressor in model tested developed friction and had to be replaced before test could be continued. Door handle convenient. Food compartment rather low and will require user to bend down more than with other refrigerators. Condenser readily accessible from top. (The particular model tested may not be generally available now; models with similar specifications are listed in the accompanying Refrigerator Comparison Table.)

Ward's Cat. No. — A64 (Montgomery Ward). \$94.50 plus shipping charges. Operating cost of model tested almost as high as last year's test model. Acceptable only where electric rate is low. Front of door was found to be slightly damaged when refrigerator was received, and was replaced before test was begun. Open compressor undesirable (see text). Condenser easily accessible for cleaning at rear.

Metal Polishes

... must scratch the surface of the metal—not too deeply (the surface will be marred), not too lightly (it will not be polished). Here are some comments on and some ratings of polishes for common household use

“**ALUMIN-NU**,” says the Pynosol Laboratories, “cleans and polishes all metals to mirror finish: aluminum, brass, copper, nickel, chromium, silver, gold, pewter, tin, bronze, stainless steel, Monel metal, Dirigold, also porcelain, enameled surfaces.”

Such sweeping claims are not unusual. As housewives know, many manufacturers of metal polishes go even further. Some preparations, according to their makers, will not only clean and polish all these metals but “preserve” and “protect” them as well. The fact of the matter is that such claims are, to put it mildly, loose. The housewife would assuredly not believe a manufacturer who claimed his product could be used both as a face cream and as a vegetable shortening. She should not expect miracles of metal polish, either.

For one thing, polishing is not the same as cleaning. A metal object can be washed until it is absolutely clean, but it may still lack polish. To make metals shine, the surface must be lightly scratched with the right kind of abrasive; the scratches must be so minute that they are invisible to the naked eye but appear, under the microscope, as fine parallel lines. If the abrasive used in polishing is too hard, the scratches will be visible, the surface of the metal marred; if the abrasive is too soft, it will merely slide over the metal surface.

The hardness of the metal is the most important factor in the choice of the correct abrasive. The differences in various metals are readily apparent by listing them according to “Mohs’ scale,” on which 10 represents maximum hardness and 0 minimum:



CLAIMS LIKE THESE

... should not be taken too seriously. Most products capable of polishing brass could not be used with complete safety on silver

ALLOY OR METAL	HARDNESS VALUE
Chromium	9
Nickel	4+
Brass	3+
Bronze	3+
Copper	3
Aluminum	3—
Gold	3—
Silver	2+

Since silver is softer than brass, the housewife should not use the same abrasive on both, if she wants both of them to be properly polished and if she values her silver.

Brass, Bronze and Copper

THE same preparation may generally be used for polishing brass, bronze and copper. All three metals corrode by forming on the surface dark-colored oxides and other compounds which must be removed by friction, sometimes with the help of chemicals. Also, this corroded surface accumulates greasy dirt, which must be removed by cleaning.

Naphtha, the base of the first metal polishes developed, easily dissolves this greasy soil. Examples of naphtha-base polishes are *Signal Metal Polish* and *Solarine*. Polishes of this type may contain compounds such as nitrobenzene. Despite the efficiency of such polishes, there is considerable objection to them. Naphtha itself is highly inflammable; the abrasive is inclined to harden into a cake at the bottom of the can; the presence of nitrobenzene in any polish is objectionable because of extreme toxicity, and is now forbidden by law.

As efficient as the naphtha base—and far safer—are the more recently developed “non-inflammable” liquid polishes, such as *Noxon* or *Liberty*. These are usually suspensions of abrasive in water, with a small proportion of soap (as an emulsifying agent), and one or more chemical cleaning agents, such as household ammonia.

Most important is the abrasive. Extremely hard abrasives, like quartz (7 on the scale of hardness), feldspar (6+), or pumice (6), will scratch brass deeply rather than polish it. Amorphous silica, in various states of fineness, and tripoli, which is softer but more expensive than silica, are both of the right degree of hardness and of the proper physical form to polish brass well.

The ammonia, or ammonium oxal-

ate, present tends to dissolve copper oxides, and its brightening action can be readily seen by pouring a few drops of ammonia on a penny. Some of these liquid polishes also contain alcohol (apparently to speed up drying), and pine oil in small amounts as a deodorant or in substantial amounts as an emulsifier. Where pine oil is present in large amounts, the preparation is likely to be a good cleaner but a relatively poor polish.

Also available for brass are polishes in powder form, such as *Silco* (which contains a small amount of powdered chalk along with a large proportion of silica) and *Star Dust* (which is a mixture of abrasive and oxalic acid). So far as the latter goes, although the oxalic acid is valuable in removing rust from nickel and other metals, its high toxicity is objectionable.

Chromium and Stainless Steel

Chromium needs no polishing, since it forms no compounds on exposure to air. But, like all other exposed surfaces, it accumulates a film of oil and other dirt and must, therefore, be cleaned. In the home, usually all that is required is either plain soap and water or a few drops of kerosene on a damp cloth. For chromium on automobiles, where oil, particularly, accumulates, proprietary cleaners like *Packard* are applicable. These usually contain silica (which is more efficient than plain soap and water in removing solid dirt) and some kind of oil (which leaves a glossy film).

Stainless steel and Monel metal, used occasionally in kitchen installations, are, like chromium, relatively non-tarnishing and require cleaning rather than polishing.

Aluminum

As CU noted last month, the best cleaner for aluminum is steel wool and soap. Proprietary cleaners usually con-

tain abrasives which may be too harsh to use with complete safety on aluminum. An analysis of *Alumin-Nu* made in 1936 revealed the presence of amorphous silica of the kind used for polishing brass. *Nu-A-Lu*, a liquid, is merely a soap solution with a slight excess of fatty acid to leave a sheen.

Silver and Pewter

THE tarnish on silver consists of brown silver sulfide, which is formed by the reaction of silver with hydrogen sulfide, a gas present in the atmosphere in minute amounts. There seem to be two generally acceptable household methods of removing this tarnish: either by means of a polish, containing a mild abrasive, or by what may be called the electrolytic method.

If a polish is used, the abrasive must be extremely soft so as not to scratch the silver deeply. Most commonly used in silver polish is diatomaceous earth—consisting of fossilized plant cells—which is also known commercially as diatomite, infusorial earth, or kieselguhr. Whiting is another soft abrasive which was once widely used in silver polishes but which has lately been more or less displaced by diatomaceous earth. Federal specifications require use of diatomaceous earth in silver polishes sold to the government.

Most silver polishes are pastes, some are liquids, a few are powders. In the pastes and liquids, the abrasive (varying in amount from 5% to 20%) is dispersed in water with the aid of soap and frequently a small amount of soda ash. Powders, since they have no water, are more economical but less convenient to use. They can be applied on a damp cloth, or they can be stirred with water into paste form.

The government requires that acids and cyanides, because of their highly poisonous nature, be absent from silver polishes used by Federal agencies; and this is probably a good thing for the housewife to require, too. Another thing she might be on guard against is a metal polish which contains both diatomaceous earth and silica. Presumably some manufacturers feel that the use of both abrasives gives them the right to advertise a universal application for their polish—diatomaceous earth for silver, silica for brass.

Silver polishes may be used on pewter, since they are both of about the same degree of hardness.

Correction

IN a report on household cleaners in the March issue of the *Reports*, it was stated that “tetrasodium pyrophosphate cannot be bought at retail.” This statement was in error. Tetrasodium pyrophosphate is available as *Co-op Water Softener*, distributed by Eastern Cooperative Wholesale, Inc., and sold in many cooperative stores.

The electrolytic method of removing tarnish makes use of a chemical reaction and, although it does not impart the shine which a regular polish does, has at least one advantage to recommend it. The reaction changes the tarnish (silver sulfide) back to metallic silver, with practically no loss of silver. Silver polishes, since they remove the tarnished silver, do cause minute losses of silver; and lightly plated ware may in time have the silverplate worn off by polish.

In the electrolytic method, tarnished silver is placed in an old aluminum pan (or in an enameled pan, but in contact with a piece of aluminum) and covered with hot water in which a little washing soda (2 teaspoonfuls to a gallon of water) or trisodium phosphate (1 teaspoonful to a gallon) and salt are dissolved. The aluminum then enters into the reaction and becomes, while the tarnish is being removed, badly stained (the housewife should not use her best aluminumware for this purpose). A little polish rubbed on the silver after the tarnish has been removed by this method will quickly impart the desired shine. Silver which has been oxidized or darkened by the manufacturer to produce an "antique" effect should not be cleaned by the electrolytic method, which removes the oxidation.

Impregnated polishing cloths may be found satisfactory if the abrasive used in their preparation is, as in the other polishes, diatomaceous earth.

Protective materials for wrapping silverware make use of an entirely different principle. Here, the cloth is impregnated with some re-agent to keep the hydrogen sulfide fumes which cause tarnish, away from the silver. Many, like *Silverbrite*, contain a neutral lead acetate, which is efficient enough but possibly hazardous because of the danger of surface contamination by the lead of silver which is to be used with food. *Pamilla*, a patented cloth, overcomes this disadvantage by the use of silver compounds instead of lead for impregnation.

ALUMINUM

Best Buy

Steel wool and soap (see *CU Reports*, April 1940).

May, 1940

Acceptable

Nu-A-Lu (Nu-A-Lu Co., NYC). 6-oz. bottle, 25¢. Soap and fatty acid in water. Price high for soap solution.

Alumin-Nu (Pynosol Co.). 5-oz. can, 35¢; 1-lb. can, 75¢. A paste metal polish with mineral oil emulsified in it.

Not Acceptable

Broza (Lumo Corp.). 10-oz. can. Sand and soap. Abrasive too coarse for aluminum.

Dexta (Dexta Co.). 4-oz. can, 10¢; 12-oz. can, 20¢. Ground limestone with added soap. Abrasive too coarse for aluminum.

BRASS, BRONZE, AND COPPER

Acceptable

Adro Metal Polish (Adro Co., NYC). 1-pt. can, 55¢. Liquid polish. Priced rather high.

Army and Navy Metal Polish (Grady Mfg. Co., Long Island City, N. Y.). 6-oz. can, 10¢. Liquid polish. High in pine oil.

Knox-Tarnish (Dolphin Chemical Co., Chicago). Small can, 25¢. A paste of silica and soap.

Liberty Metal Polish (Scranton Chemical Co., Scranton, Pa.). 1-gal. can, \$1.25. Non-inflammable liquid polish.

Magic Metal Polish (Magic Polish Co., NYC). 1-pt. can, 40¢. Liquid polish. High price.

Matchless Liquid Rouge (Matchless Metal Polish Co., Ridgewood, N. J.). 1-pt. can, 45¢; 1-qt. can, 65¢. Liquid polish. Iron oxide added to give red color but the polishing agent was silica.

More Lustre Metal Polishing Cloth (K & B Chemical Co.). Effective, but of low lasting quality.

Noxon Cleaner Polish (Noxon Chemical Products Co., Newark, N. J.). 3-oz. can, 10¢ (Woolworth's); 1-qt. can, 59¢ to 75¢. Non-inflammable liquid polish.

Rub-Less Metal Polish (Feiner Chemical Mfg. Co., Springfield, Mass.). 3-oz. can, 10¢. Liquid polish. Small amount of pine oil added for odor.

Silco Metal Polish (Tamms Silicao Co., Chicago). 4 oz., 10¢. A paper envelope containing silica and chalk.

Sun Sparkle Metal and Glass Polish (Sparkle Chemical Co., Long Island City, N. Y.). 1-pt. can, 45¢. Good liquid metal polish but only fair as a glass cleaner.

Not Acceptable

Buckeye Copper Polish (Buckeye Chemical Co.). 1-lb. box, 60¢. Powder. Poisonous; contained 16% of oxalic acid.

Signal Metal Polish (Baltimore Copper Paint Co.). 1-pt. can, 30¢. Inflammable. Naphtha type, with added ammonia and ammonia soap.

Solarine (Solarine Products Co.). Inflammable; contained nitrobenzene.

Star Dust Metal Conditioner and Polish (Star Dust Div. of Cleveland Container Co.). 1/4 lb., 40¢; 1 lb., \$1. Powder. Contained 9% of oxalic acid; if it contained 10%, the U. S. Caustic Poison Act would require that it carry a poison label.

CHROMIUM

FOR HOME CLEANING:

Best Buys

Soap and water.

Kerosene and damp cloth.

AUTOMOBILES:

Acceptable

Admiral Chromium Cleaner (Admiral Products Co., NYC). 1/2-pt. can, 29¢. A solvent emulsion in water.

Packard Chromium Cleaner (Packard Motor Car Co.). 1/2-pt. can, 50¢. A similar emulsion, but with more solvent present.

Simoniz EZ-2 Chrome Cleaner (Simoniz Co., Chicago). 16-oz. can, 50¢. Metal polish with a mixture of pine oil and mineral oil added.

SILVER AND PEWTER POLISHES

Acceptable

Electro-Silicon Polishing Cream (Electro-Silicon Co., NYC). 4-oz. can, 10¢; 8-oz. can, 19¢. Contained 72% water.

Electro-Silicon Silver Polishing Powder (Electro-Silicon Co.). 4-oz. can, 10¢; 8-oz. can, 19¢. More economical but less convenient than the paste.

Gorham's Silver Polishing Cream (Gorham Mfg. Co., Providence, R. I.). 8-oz. jar, 23¢ to 35¢. Paste; contained 71% water.

Gorham's Silver Polishing Powder (Gorham Mfg. Co., Providence, R. I.). 6-oz. can, 35¢. More economical but less convenient than the paste.

Johnson's Ski-nup Silver Polish (S. C. Johnson & Son, Racine, Wis.). 8-oz. jar, 25¢. Contained 75% water.

Kantor's Sunshine Silver Polish (Klein & Son, Montgomery, Ala.). 8-oz. bottle. A suspension of diatomaceous earth in dilute alcohol.

(Continued on page 14)

(CONT'D FROM PAGE 13)

Reed & Barton Silver Polish (Reed & Barton, Taunton, Mass.). 3-oz. jar, 10¢. Contained 82% water.

Silververtex Powder (Galree Products Co., NYC). 8-oz. jar, 50¢.

Tarnish-Resist Silver Polish (John L. Snowber, NYC). 4-oz. bottle, 50¢. Liquid.

Wright's Silver Cream (J. A. Wright & Co., Keene, N. H.). 8-oz. jar, 25¢. Less efficient than *Gorham's*, because it contained 80% water.

Not Acceptable

Magic Silver and Pewter Polish (Magic Polish Co.). 8-oz. can, 25¢. Too harsh for silver and pewter.

The Glad Rag (Glad Rag Products Corp.). 2 sizes of cloth, 10¢ and 20¢. Claims unjustified, abrasive too harsh.

SILVER-PROTECTIVE CLOTHS

Acceptable

Pamilia Silver Cloth (Pacific Mills, Boston). \$2.50 a yd. Silver-impregnated cloth.

Not Acceptable

Silverbrite Pad (Swartzbough Mfg. Co.). Contained lead acetate.

Canned Tomato Soups

The three most highly preferred, on the basis of taste tests, were of the condensed type—which cost about half as much as the ready-to-serve

OF THE two types of canned tomato soup, ready-to-serve brands cost from 50% to 120% more per serving than condensed brands. And, on the basis of CU's flavor tests, the three most preferred soups were of the cheaper condensed type. These averaged a little over a penny-and-a-half per serving—including the cost of the added milk; ready-to-serve cream of tomato soups averaged over 3¢.

As with canned chicken soups (rated in last month's *Reports*), there are no government standards to serve as a basis for rating canned tomato soup; but, since preferred flavor usually accompanies high quality, group taste tests were used as a basis for rating. Government graders agreed that flavor tests offered the best available method for rating tomato soups.

But taste is entirely a subjective factor. Two persons tasting the same sample of food may have widely different opinions of its flavor. The only ultimate standard for flavor is whether

Don't miss these delicious new RANCHO SOUPS



96% of those who tasted these California made soups at the Rancho booth on Treasure Island voted them better than or equal to any others.

NO CORRELATION

Only 31% of CU's tasters found Rancho "Good"

people like it. Nevertheless, by allowing a sufficiently large number of people to taste samples of certain foods, it is possible to get statistics on the flavor popularity of each.

It is interesting to note in this connection that there was a fair amount of agreement on the soups rated highest and lowest by the tasters. Some 59% rated *Ann Page* Condensed good and only 15% rated it poor; 9% rated *Hormel's* Cream good, 57% rated it poor. A skilled cook could probably prepare a home-made cream of tomato soup that would be superior to any of the canned soups, but whether it would be sufficiently superior to justify the extra work is a matter for the individual housewife to decide.

Soups were prepared for the taste tests according to the directions for cream of tomato soup on their labels. Ready-to-serve soups (which already contain cream, or milk and butter) were merely heated; condensed soups were diluted with an equal volume of milk, and cost per serving includes cost of the milk (at 11¢ a quart).

Ten brands were rated by approximately 30 tasters.

Canned Tomato Soups—Price & Flavor Ratings

The following brands are listed in the order of their popularity in flavor tests, best first. The cost per serving is for soups prepared according to the directions on the label, and includes the cost of the milk to be added to the condensed soups.

BRAND AND MANUFACTURER OR DISTRIBUTOR	PERCENTAGE OF TASTERS RATING PRODUCT AS:			NET WEIGHT (OZ.)	PRICE PER CAN (¢)	COST PER 4-OZ. SERV- ING (¢)
	GOOD %	FAIR %	POOR %			
<i>Ann Page</i> Condensed (A&P)	59	26	15	10½	6	1.8
<i>Campbell's</i> Condensed (Campbell Soup Co., Camden, N. J.).....	46	27	27	10½	8	2.1
<i>Val Vita</i> Condensed (Val Vita Food, Fullerton, Calif.)	36	39	25	15	5	1.3
<i>Crosse & Blackwell</i> Cream (Crosse & Blackwell, Balti- more).....	37	37	26	16	13	3.3
<i>Gibbs</i> Condensed (Gibbs & Co., Baltimore).....	34	31	35	10½	5	1.5
<i>Phillips</i> Condensed (Phillips Pack. Co., Cambridge, Md.)	32	36	32	10½	5	1.5
<i>Rancho</i> Condensed (Cali- fornia Sunnyvale Packing Co., San Francisco).....	31	27	42	10½	5	1.5
<i>Co-op</i> Cream (Nat'l Co- operatives Inc., Chicago).	26	39	35	16	13	3.3
<i>Heinz</i> Cream (H. J. Heinz, Pittsburgh).....	16	30	54	16	13	3.3
<i>Hormel</i> Cream (Hormel & Co., Austin, Minn.).....	9	34	57	16	13	3.3

Sanitary Pads

... and tampons were tested for utility and absorption. Of 34 brands of pads, Veldown was found most efficient; 6 brands of tampons proved fairly similar in efficiency

IN TESTING sanitary pads and tampons, all-round utility was considered. So far as pads go, a survey made of use habits indicated that women are likely to change pads four or five times a day during the time of greatest flow, around twice a day at other times. These rather frequent changes were made, the survey indicated, for greater comfort and for esthetic reasons, rather than from necessity. Smaller, less bulky pads capable of taking care of heavy flow under such use conditions were deemed more desirable, therefore, than heavy pads with larger total absorption power than is normally required.

Pads

Composition. The major (absorbent) section of most pads consists of absorbent crepe paper, cellulose dust (cellulose ground into fine fibers), or cotton. In the better paper and cellulose pads, the absorbent material is covered by a moisture-repellant wrapper, the entire pad being enclosed in a cotton gauze wrapper. Cotton pads are generally covered by a cotton stockinette wrapper (*Venus, Dixie Belle, Aimcee, Gallia*); total absorption is slightly higher than paper or cellulose pads, but they are heavier, bulkier (although somewhat softer), and more expensive.

Moisture - repellent Wrappers. Most effective is the moisture-repellant

wrapper found on *Veldown*, which is treated only on the sides and bottom; such wrappers tend to keep liquid within the pad. Less effective than the *Veldown* wrapper, but better than the other wrappers found generally, are those of the new *Kotex* (with moisture-repellant bottom and sides, but with a layer of cotton linters which tends to bring liquid to the sides) and of *Modess* (where a wrapper of slightly moisture-repellant paper is further wrapped in a sheet of treated cotton linters). Most other pads so treated have merely a few sheets of moisture-repellant paper on the outside; many have no moisture-repellant features at all.

Disposal. Although most brands of napkins are advertised as "easily disposable," they are still disrupting plumbing systems. Those with cotton fillers or cotton wrappers are most to blame, since cotton will not dissolve. Cellulose dust and crepe paper fillers can be flushed away safely if they are separated from their cotton and gauze wrappings and removed in two or more flushings. The best rule, however, is to keep a covered container in the bathroom, or to dispose of the pads in the garbage pail.

Tampons

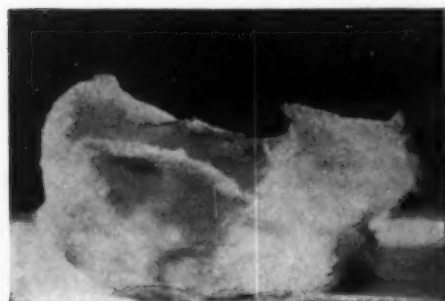
Tampons have appealed to many women because their compactness and small bulk make them suitable for

quick use and because they interfere less with normal activity than pads. Since they are small, however, they can be used only by women with a moderate or slight flow; and further, since insertion is necessary, most gynecologists recommend their use only by married women.

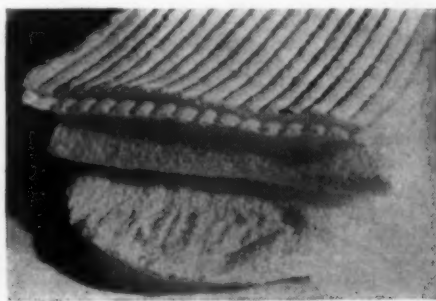
Safety. No thorough clinical study of the safety of tampons has been reported. Some doctors hold that infection of the uterus and tubes may occur as a result of damming back the flow, but there is little likelihood that this will occur in women with moderate or slight flow. One decided advantage in the use of tampons is that it removes the possibility of contamination of the vaginal area by fecal material, a process that is frequent in the use of pads and that is responsible for many instances of infections by the trichomona parasite.

Efficiency. Tampons are smaller than pads, and therefore hold less liquid; test results indicate that they have to be changed as often as pads—and, in some cases, more often. Women with more than normal flow will probably find them unsatisfactory. *Hollypax* advises the use of two plugs side by side during periods of high flow and the use of an external pad if necessary; *Fibs* advises their use only during the last few days unless normal flow is small.

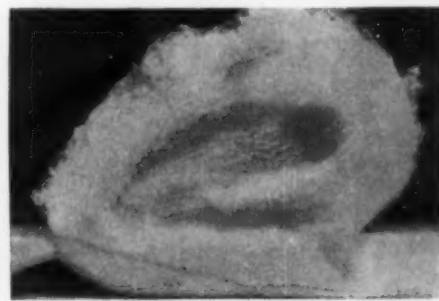
Construction. Tampons are either compressed (pressed under high pressure to final size) or crimped (pressed lightly to final size). The crimped type will absorb more liquid more rapidly than the compressed type but will strike through more rapidly. Construction of each tampon tested is indicated in the ratings below.



CELLULOSE DUST



PAPER



COTTON

Most sanitary pads use one of these three materials for their major absorbent section; neither was found, on all counts, to be better than the others; cotton is more absorbent and softer but also heavier and bulkier

Tests and Ratings

As noted above, the ratings are based on all-round utility. Special features, while indicated, were not considered in the ratings unless they actually added to efficiency or comfort. In this way, moisture-repellant features which allowed or caused liquid to strike through at the sides were rated on the basis of the interval before they struck through, giving a common basis for comparing all types of pads. Tampons were tested to determine both the speed with which they absorbed liquid and their total absorption. Pads were tested for absorption before striking through and for total absorption.

Conditions of test simulated, as far as possible, conditions of actual use; a device was used which allowed a colored solution to contact pads held under constant pressure. An average of five tests was taken as a final result, except where there was excessive variation, when more tests were made. Also considered in the ratings were such factors as general construction.

Size, weight and bulkiness have been more or less standardized and the brands tested showed little variation. From five to 10 samples of each brand were tested.

PADS

Best Buy

Veldown (Veldown Co., NYC). 23¢ per doz. Evenly packed cellulose fiber. Best design of those tested. Moisture-repellant on bottom and sides. Liquid spread in length and was kept away from sides. Highest quality tested.

Also Acceptable

(In order of quality, regardless of price)

Kotex Regular (International Cellucotton Products Co., Chicago). 20¢ per doz. Absorbent paper filler. Center sheets were smaller than rest to give tapered ends. Moisture-repellant sheet was on bottom. Spread evenly in length but absorbent cotton on sides and top brought liquid to sides. Second highest quality tested.

Venus (Venus Corp., NYC). 89¢ per doz. Good quality. Cotton pad. Filler consisted of a sheet of absorbent cotton folded in fours. Knitted stockinette wrapper, with ends sewn to prevent shifting of filler. A high grade pad. Very bulky but highly absorbent and softer than cellulose and paper pads.

Kotex Super. 20¢ per doz. Design simi-

lar to regular *Kotex* except that it was heavier and had the moisture-repellant sheet in the center. This pad was not as good as regular *Kotex*. Tapered ends.

Modess (Personal Products Corp., NYC). 19¢ per doz. Cellulose fiber filler in moisture-repellant wrapper with sides and top covered with moisture-repellant cotton liners. This design did not allow pad to absorb as much liquid as it might, but resisted striking through. Even packing permitted even spread of liquid.

Gallia Medium² (The White House, San Francisco). 50¢ per doz. Filler consisted of a sheet of absorbent cotton folded in fours. Knitted stockinette wrapper. Good quality pad. Very bulky but had high absorbency and was softer than cellulose and paper pads.

CD (Cooperative Distributors, NYC). 18¢ per doz. Paper filler with four pink sheets of moisture-repellant paper on bottom. Good grade pad. Stained evenly in length. Tapered ends.

Sanimac (R. H. Macy & Co., NYC). 16¢ per doz. Paper filler with four pink sheets of moisture-repellant paper on bottom. Good grade pad. Stained evenly in length. Tapered ends.

Raycel (Sontag Drug Co., Los Angeles). 12½¢ per doz. Paper filler with four pink sheets of moisture-repellant paper on bottom. Good grade pad. Stained evenly in length. Tapered ends.

Modernap² (Broadway Department Store, Los Angeles). 17½¢ per doz. Paper filler with four pink sheets of moisture-repellant paper on bottom. Good grade pad. Stained evenly in length. Tapered ends.

Nappettes² (Owl Drug Co., San Francisco). 11¢ per doz. Paper filler with four pink sheets of moisture-repellant paper on bottom. Good grade pad. Stained evenly in length. Tapered ends.

Gauzette (United Drug Co., Boston). 19¢ per doz. Filled with absorbent paper, with a thin sheet of rubber latex near the bottom, which takes the place of moisture-repellant paper. Tapered ends.

Co-op (Eastern Cooperative Wholesale, Brooklyn). 17¢ per doz. Paper filler with four pink sheets of moisture-repellant paper on bottom. Good grade pad. Stained evenly in length. Tapered ends.

Celleen² (Sontag Drug Co., Los Angeles). 12½¢ per doz. Paper filler with four pink sheets of moisture-repellant paper on bottom. Good grade pad. Stained evenly in length.

Econo-Pak (Sears-Roebuck). 50 for 35¢. Made of absorbent paper with two sheets of yellow moisture-repellant paper on bottom. Liquid spread rapidly to sides because of a cotton layer on top.

Cellu-Ettes (Sears-Roebuck). 14½¢ per doz. Made of absorbent paper with two sheets of yellow moisture-repellant paper on bottom. Liquid spread rapidly to sides because of a cotton layer on top.

² Available in the West only.

San-Aid (Whelan Drugstores, NYC). 24 for 25¢. Consisted of absorbent sheets of paper. Liquid spread evenly in length.

Dixie Belle (F. W. Woolworth Stores). 6 for 10¢. Cotton pad. Consisted of single layer of absorbent cotton in a stockinette jacket. Bulky and of medium absorbency. Softer than cellulose in paper sheets.

Ramona² (Weinstein Co., San Francisco). 11¢ per doz. Consisted of absorbent paper with tapered ends.

Nu-Vel (Walgreen Drugstores, NYC). 15¢ per doz. Consisted of sheets of absorbent paper with a layer of absorbent cotton on top. Cotton offered little added comfort.

Thrift Fluff (Montgomery Ward). 11½¢ per doz. Cellulose fiber filler in a slightly moisture-repellant wrapper which did not appear as effective as others.

Lotus (Sitroux Co., NYC). 8 for 10¢. Filler consisted of sheets of absorbent paper, with three sheets of yellow moisture-repellant paper on bottom.

Iris (Sitroux Co.). 10¢ per doz. Filler consisted of sheets of absorbent paper. The layer of cotton liners around top and sides of pad offered little added comfort.

Belfair (Seabury, Inc., New Brunswick, N. J.). 13¢ per doz. Consisted of cellulose fiber mixed with short staple absorbent cotton, wrapped in a slightly moisture-repellant paper with a heavy sheet of similarly treated paper on the bottom. Tended to strike through at sides rapidly.

Aimcee² (The Emporium Stores, San Francisco; Bullock's, Los Angeles). 25¢ per doz. Cotton pad. Consisted of a single layer of absorbent cotton in a stockinette wrapper. Bulky with medium absorbency.

Rexettes (United Drug Co., Boston). 17¢ per doz. Consisted of absorbent paper sheets with tapered ends.

The following are acceptable if normal flow is small, or for the last day or two of the period.

Sanoval (S. H. Kress Stores, NYC). 15¢ per doz. Filler consisted of sheets of absorbent paper, layer of thin soft paper and thin layer of absorbent cotton on top and sides. Cotton offered little added comfort.

San-Neat (F. W. Grant Stores). 8 for 10¢. Absorbent paper filler with tapered ends.

So-Soft (Montgomery Ward). 13¢ per doz. Absorbent paper sheets with tapered ends.

Not Acceptable

Vees (Rieser Co.). 15¢ per doz. Filler consisted of cellulose fibers in a wrapper of absorbent paper and a thin layer of cotton liners. Absorbency variable due to uneven packing. Layer of cotton liners added little to comfort.

San-Nap-Pak (San-Nap-Pak Mfg. Co.). 15¢ per doz. Absorbent paper sheets with tapered ends.

Cashmere (F. W. Woolworth Stores). 10 for 10¢. Absorbent paper sheets. Skimpy construction.

Roda (R.D.A. Sales Corp.). 15¢ per doz. Filler consisted of absorbent paper sheets.

Lanvette (San-Nap-Pak Mfg. Co.). 15½¢ per doz. Absorbent paper sheets with tapered ends.

Marlene (J. J. Newbury). 10¢ per doz. Absorbent paper sheets. Thin and skimpy in construction. Tapered ends. Worst quality tested.

TAMPONS

All tampons tested were fairly similar in all-round efficiency, with the exception of Cashay, which was found to be slightly superior. The choice of tampons is one of individual preference and price. The following listing is alphabetical; order has no significance.

Cashay (Park & Tilford, NYC). 35¢ per doz. Consisted of two puffs tied together with 8 strips of gauze between. Construction gave medium absorption time and high absorbency. Individually wrapped in cellophane.

Fibs (International Cellucotton Products Co., Chicago). 25¢ per doz. Made by rolling large sheets of crepe paper and wrapping in a loose woven cotton gauze-like jacket. These long rolls are compressed so as to appear quilted and then cut to final size. The string was anchored to plug by placing it through hole and tying it around the tampon.

Holly-Pax (Universal Cotton Products Corp., Hollywood). 10 for 20¢. Compressed absorbent cotton from a sheet of cotton liners about 9½x2 inches. It was wound around the string and then compressed. Wrapped in cellophane packages of 4, 4 and 2, enclosed in one container.

Lotus (Sitroux Co., NYC). 5 for 10¢. Made of absorbent cotton rolled up and covered with crepe paper and then slightly compressed. String ran half way through and then down through bottom. Wrapped in envelope containing 3 and 2 each, and enclosed in final container.

Tampax (Tampax, Inc., New Brunswick, N. J.). 5 for 20¢. Consisted of a layer of absorbent cotton about 3½x1¼ inches, sewn down the middle and then crimped to final size. Individually wrapped in cardboard tubes and cellophane. Care must be taken in removing cellophane because Tampax leaves tubes easily.

Wix (Wix Co., Minneapolis, Minn.). 5 for 20¢. Made of tightly rolled sheet of absorbent cotton 11x2¼ inches with the top wrapped in crepe paper and then compressed. The center of tampon was wrapped in a sheet of perforated cellophane. The string ran half way through plug and out at the bottom. Wrapped 3 and 2 each in cellophane wrappers and enclosed in final package.

Artificial Baits

Here are some recommendations to help guide the amateur fisherman in his selection of fish lures, and a listing of lures which have been found satisfactory

THE average neophyte fisherman is completely baffled by the awe-inspiring array of artificial lures in sporting goods stores, department stores, village general stores, and even in drugstores.

A few general comments on this tremendous array may be of some assistance. First, some experts are convinced that the color of the lure is of little consequence—its action in water seems to be most important. Other experts believe that red-and-white or natural fish finishes are recommended.

If the lures you buy are accompanied by printed instructions, read them carefully and follow them. If the manufacturer leaves you to your own ingenuity, remember to vary your technique when fish respond slowly—reel fast, reel slowly, jerk your rod slightly. If the lure you use is of the floating type, allow it to float for 30 seconds or more, reel in a little, pause again.

Following is a partial list of nationally distributed baits which should catch fish—many fish and big fish—although CU supposes that empty-handed fishermen will continue to blame their bait among other things. Some of the lures listed are “old-timers” the effectiveness of which has been proved over a period of years; others are “youngsters” which have met with considerable immediate success. The list is by no means a complete one, and many other excellent lures are to be found. It is more in the nature of a suggestion; no attempt has been made to rate the lures on their comparative merits:

Pickereel

Johnson Silver Minnow (with pork rind).
Eppinger Dardevl.
Heddon River Runt (jointed and plain).
Heddon Crazy Crawler.

Pike (Great Northern)

Eppinger Dardevl.
Heddon River Runt.

Heddon Crazy Crawler.
Creek Chub Pike Minnow (jointed and plain).

Pike (Walleye)

Eppinger Dardevl.
South Bend Bass Oreno.
Heddon River Runt.
Creek Chub Pike Minnow.
Johnson Silver Minnow.

Muskellunge

Pflueger Muskill.
Creek Chub Pike Minnow (large and medium sizes, jointed).
Marathon Musky Houn.

Bass (Smallmouth)

Creek Chub Injured Minnow (follow directions!).
Heddon River Runt.
South Bend Bass Oreno.
Johnson Silver Minnow.
Al Foss Spinners (Oriental, Dixie, &c.).
Mouse (various brands—Heddon, Shakespeare, &c.).

Bass (Largemouth)

Heddon River Runt.
Creek Chub Injured Minnow.
Johnson Silver Minnow.
Eppinger Dardevl.
Heddon Lucky 13.
Creek Chub Pike Minnow.

Pan Fish

Pflueger Colorado and Indiana Spinners.
Heddon River Runt.
Arbogast Tin Liz.

Trout

The field of fly-fishing for trout is a territory in which angels are reluctant to tread. Countless volumes have been written on every phase of the subject, and it is a field in which the thousands of experts agree on but one thing—that fly-fishing is an art. CU suggests that you attach yourself to a friend who has given evidence of success in tempting the temperamental trout. Failing that, rely on the judgment of an established sporting goods dealer or resort proprietor. And remember—avoid slack in your line, keep the tip of your rod up!

Canned Green Beans—Price & Quality Ratings

GREEN BEANS may be packed in several ways: asparagus style (pods approximately equal in length packed parallel); whole (whole pods without special arrangement in packing); cut (pods cut into pieces 1 to 2½ inches in length); and sliced (shredded).

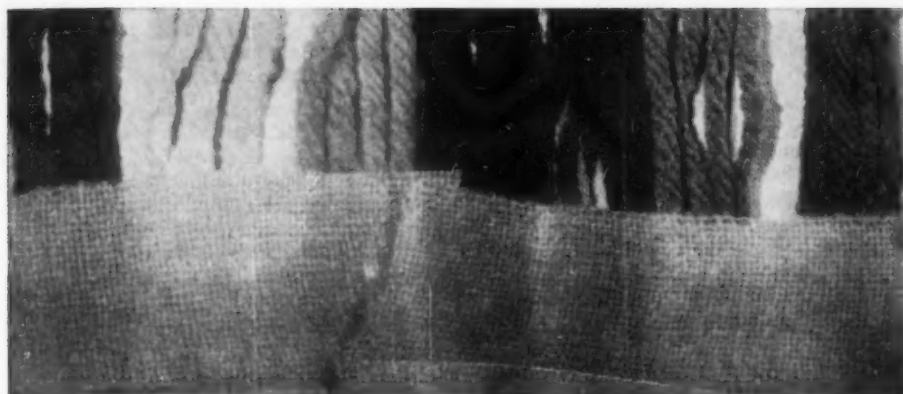
In the current test, 24 of the 78 brands tested showed one or more

slack-filled cans: Number 2 cans which failed to meet the government's specification of 11½ oz. drained weight for whole beans or 12 oz. drained weight for cut beans. Although the percentage of slack-filling is somewhat better than that obtained for drained weight of canned fruits (CU Reports, March 1940), it is still far too high.

Green bean ratings in the following table are based on uniformity of size and color, absence of defects, flavor, maturity, and clearness of liquor as determined by graders in the U. S. Dep't of Agriculture's Agricultural Marketing Service. From two to six samples of each brand (a total of 202 cans) were tested.

BRAND AND PACKER OR DISTRIBUTOR	STYLE	AVG. COST PER NO. 2 CAN (¢)	AVG. SCORE	BRAND AND PACKER OR DISTRIBUTOR	STYLE	AVG. COST PER NO. 2 CAN (¢)	AVG. SCORE
Grade A (In alphabetical order)				Cosmos (Sussman, Wormser)	Cut	11	77
A&P ¹ (A&P, NYC)	Whole	15	91	Delford (Middendorf-Rohrs, NYC) C&W		18	84 ^{3,4}
Bonnie Best ² (Younglove, Tacoma) Cut		14	91	DeLuxe (Greco, San Jose, Calif.) . . .	C&A	14	84
Briardale ¹ (United Groc., San Fran.) Whole		22	92	Dodge ¹ (Haas Bros., San Francisco) .	Cut	14	89
Century ² (Sussman, Wormser, San Fran.)	Cut	13	91	Economy (Equitable Cash Groc., San Francisco)	Cut	10	85
Co-op Red Label ¹ (Nat'l Coops., Chicago)	Cut	15	93 ³	Freshlike (Larsen, Green Bay, Wis.)	Cut	12 ⁵	87 ⁴
Del Monte (Calif. Pack., San Fran.) C&W		15	92 ³	Geneva ¹ (Geneva Preserv. Co., Geneva, N. Y.)	Cut	13	83
Finer Flavor (Newmark, Los Angeles)	Aspar.	16	94	Gerber's (Gerber, Fremont, Mich.) .	Cut	12	83
Grand Union (Grand Union, NYC) .	Whole	17	93	Happy-Vale (Emery Food, Chicago) .	Cut	9	82 ⁴
Grisdale ¹ (Gristede, NYC)	Whole	25	95	Hart (W. R. Roach, Grand Rapids) .	C&W	14	79 ³
Highway (Gen. Food, Oakland) . . .	Cut	10	90	Industry (Gen. Food, Oakland) . . .	Cut	9	84
Iris ¹ (Haas, Baruch, Los Angeles) .	Cut	15	92 ³	Jack Sprat ¹ (Jack Sprat Foods, Marshalltown, Iowa)	Cut	14	77
Kroger's Country Club ¹ (Kroger Groc. Co., Cincinnati)	Whole	17	94 ³	Krasdale (A. Krasne, NYC)	Cut	12	78 ³
Manhattan Quality (Manhattan Quality Stores, NYC)	Whole	25	95	Kuner's (Kuner, Brighton, Colo.) .	Cut	13	80
Nutradiet ¹ (Nutradiet, San Fran.) .	Whole	20	94	Lakeside (Lakeside Packing Co., Manitowoc, Wis.)	Whole	23	89
P&G (Paxton & Gallagher, Omaha) Cut		18	92 ³	Libby's (Libby, Chicago)	C&W	15	87 ^{3,4}
Red & White (Red & White, Chi.) .	Cut	15	90 ⁴	Monarch (Reid, Murdoch, Chi.) . .	C&W	18	89
Reeves' Best (Daniel Reeves, NYC) C&W		17	91 ³	Nu-Deal (V. Traverso, San Fran.) .	Cut	10	86
Royal Scarlet (R. C. Williams, NYC)	Whole	20	92	Premier (F. H. Leggett, NYC) . . .	C&W	17	83 ⁴
S&W (Sussman, Wormser)	C&W	18	92	Reliable ¹ (A&P, NYC)	Cut	11	79
Shurfine ¹ (N.R.O.G., Chicago) . . .	Sliced	15	92 ³	Santavalle (Barron-Gray, San Jose) Cut		13	88 ³
Sweet Girl (Nat'l Tea, Chicago) . .	Whole	19	90 ³	Savoy (Steele-Wedeles, Chicago) . .	C&W	17	83 ³
Trupak ¹ (Haas Bros., San Fran.) . .	C&S	21	95	Snider (Snider, Rochester, N. Y.) .	Cut	14	82
Wellman (Wellman-Peck, San Fran.) C&A		19	91 ³	Stokely's (Stokely, Indianapolis) . .	Cut	13	76
West Farms (Washington Packers, Inc., Sumner, Wash.)	Cut	19	90	Superfine (Chas. G. Summers, Jr., New Freedom, Pa.)	C&W	15	80 ⁴
Westlake (Briardale, San Fran.) . .	Cut	13	90	Sweet Life (Sweet Life Food, NYC) .	Whole	15	88
Grade B (In alphabetical order)				Tastewell (N.R.O.G., Chicago) . .	Cut	11	81
American Home (Nat'l Tea, Chi.) .	Cut	13	79	White Rose (Seeman Bros., NYC) .	C&W	17	84 ³
Avondale (Kroger, Cincinnati) . . .	Cut	12	77	Yellowstone (Paxton & Gallagher) Cut		15	82
Baby Stuart (Sprague, Warner, Chi.)	Whole	19	83	Grade C (In alphabetical order)			
Bohack's ¹ (H. C. Bohack, NYC) . . .	Cut	13	79	A&B (Ancona Bros., Omaha)	Cut	13	73 ³
Brimfull (H. A. Marr, Denver) . . .	Cut	15	84	Bluebrook (Jewel Tea Co.)	Cut	7	73 ³
Carroll's (Leslie Co., San Fran.) . .	Cut	10	87 ³	Colonial (Nat'l Food, NYC)	Cut	9	71
Cayuga (Hemingway, Auburn, N. Y.)	Cut	10	75	Elmdale (N.R.O.G., Chicago) . . .	Cut	9	71 ³
Cherry Valley (Jewel Tea Co., Barrington, Ill.)	Cut	10	80	Farmdale (American Stores, Phila.)	Cut	9	74
Clear Lake (Clear Lake Cannery, Upper Lake, Calif.)	Cut	11	86	Freshpak (Grand Union, NYC) . . .	Cut	12	74
Co-op Blue Label (Eastern Coop. Wholesale, NYC)	Cut	11	88	Gibbs (Gibbs & Co., Baltimore) . .	Cut	11	70
				HQA (Hillsboro-Queen Anne Coop., Baltimore)	Cut	7	70 ³
				Iona ⁶ (A&P, NYC)	Cut	8	70 ^{3,4}
				Phillips (Phillips, Cambridge, Md.)	Cut	9	70 ⁴
				Pine Cone (Sisk, Preston, Md.) . . .	Cut	9	70
				Pride of the Farm (Roberts, Phila.)	Cut	9	72 ³
				Unicorn (F. H. Leggett, NYC) . . .	Cut	11	70
				Yacht Club (Reid, Murdoch, Chi.)	Cut	13	73 ³

¹ Labeled "Fancy" or "Grade A." ² Labeled "Choice" or "Grade B." ³ 1 or more cans slack-filled; below standard drained weight. ⁴ Quality variable. ⁵ 10½-oz. can, vacuum packed. No liquid. ⁶ Labeled "Grade C." The abbreviation "C&W" means cut and whole; "C&A," cut and asparagus.



The strip of cloth above was washed with the yarns (different colors of the same brand); originally white, it was stained by each of the colors

Knitting Yarns

Tests of 67 samples of 9 brands reveal that only one brand—Botany—is completely colorfast to sunlight, to laundering, and to perspiration

IT WAS probably the Scottish Highlanders who originated the craft of knitting to supplement the output of the loom; families of the moors clipped the wool from their own sheep, scoured, dyed and spun it by tedious hand methods, and, from the resulting rough woolen yarns, made clothing.

The modern woman hand knits with machine-made worsted yarn of far greater uniformity and of a greatly refined appearance. She has a choice of a bewildering number of colors, including all those of the rainbow and some which even the rainbow lacks. One standard 4-ply knitting worsted is available in 68 shades.

Hand-knitting yarns are made in a large variety of constructions as well as colors, but the most commonly used all-wool yarns are these:

Four-ply knitting worsted—a yarn made of four separate strands of one color twisted together to form one fairly heavy yarn, spun from a medium grade of wool.

Knitting ombres—blended colors of the same type of construction as the knitting worsteds.

Germantown Zephyr worsteds (or Afghan Germantown Zephyr)—a finer wool than ordinary knitting worsteds, spun into 4-ply yarns.

Shetland floss—a 2-ply yarn of fine wool.

Cassimere sport yarns—usually a

4-ply yarn of lightweight wool, having a tighter twist than a knitting worsted.

Saxony yarns—2-, 3- or 4-ply yarns of wool in lighter weights.

Sports or tweed yarns—usually a 3-ply construction of fairly heavy weight, medium-grade wool, with each strand a different color.

In addition, many yarns are combinations of wool and rayon, or wool and cotton; others contain silk, angora rabbit, mohair, camel's hair, &c. Further, these may be bought in plain twists or in crepe, boucle, nub and other fancy constructions. The sample book of one manufacturer lists 60 different kinds of yarns.

For this report, CU has limited itself to the regular 4-ply knitting worsted including ombres—probably most commonly used of all knitting yarns. One sample each of approximately seven colors of each brand was tested (a total of 67 separate color samples); the ombres were taken apart and the different shades tested separately for colorfastness.

The average amount of twist used in knitting worsted, according to test results, is approximately 1.6 to 1.7 turns per inch, with very little variation. The four strands are twisted together loosely enough to enable the yarn to remain soft, fluffy and resilient while holding together. The soft fluffy

quality of knitting worsteds arises from the nature of the wool itself. Wool fibers are naturally very resilient and with low twists do not become compressed or strained.

A tightly twisted yarn would compress the fibers and would decrease the fluffy feel and texture of the yarn and of the finished fabric.

In tests made on delivered content as compared with package claims, it was found that in general the average of a particular lot is fairly close to claimed content, although individual samples may show fairly wide discrepancies. Tests made on twist, staple length and weight per unit of length of the various yarns disclosed few differences.

THE most important consideration to the buyer is the permanence of the color in relation to washing, to perspiration, and to sunlight. Fading is the most common cause for complaint by customers. It is also the factor in which most significant differences were found in the tests.

For this report, CU's shoppers purchased, wherever possible, all the colors in the basic spectrum—red, orange, yellow, blue, green, violet—of each brand tested in order to obtain a cross-section of the dyestuffs used in each brand. All colors were tested to determine the effects of washing, perspiration and sunlight. Only one brand—*Botany*—can be given a complete bill of health (based on the seven samples tested) in all three respects.

Most knitting yarn is commission dyed; the white yarn in skein form is sent out to job dyehouses by the packager of the yarn. Such information as is available indicates that *Botany* wool is handled differently. The wool is dyed before being spun into yarn, while it is still in what is known as top form. This permits the use of faster colors, and gives more satisfactory results as far as permanence of color is concerned.

But most worsted yarns can be satisfactorily washed. Garments should be washed in lukewarm water with neutral soap flakes (such as *Lux* or *Ivory*) with a minimum of agitation, rinsed thoroughly in fresh water at the same temperature, pressed between the folds of a Turkish towel, shaped to original size, and dried flat in a cool place, preferably in a draft of air.

In the perspiration test, some colors of all brands except *Botany* were found to cause staining of other materials. As might be expected, the deeper shades showed the most staining; reds and red combinations (oranges, browns, &c.) were the chief offenders. Sweaters and other garments worn next to areas of the body which perspire freely should, if not made of yarns colorfast to perspiration, be protected by shields.

The sunlight test (24-hour fadeometer exposure) showed objectionable fading in certain colors of those tested—*Woolco* lavender and blue; *Kresge Pilgrim* blues; *Amera* blue; *Superior* yellow (which faded almost to white), light lavender and dark green; *Superior* blue (which turned to a reddish cast); *Quaker* lavender. The other colors showed no appreciable fading in this test.

The ratings which follow are based on resistance of the colors tested to washing, to perspiration and to sunlight, since in other respects little difference was found among the various yarns tested.

Best Yarn

Botany (Botany Worsted Mills, Passaic, N. J.). 2 oz., 49¢; cost per oz., 24.5¢. Colorfastness to washing, perspiration and sunlight satisfactory.

Second Group

(In order of price)

Bear-Bucilla Standard (Bernhard Ulmann, NYC). 3¼ oz., 69¢; cost per oz., 18.4¢. Brown color stained in washing. Red, brown and orange stained in perspiration tests. Resistance to sunlight of all colors tested was satisfactory.

Milady (Jas. Lees & Sons Co., Bridgeport, Pa.). 4 oz., 75¢; cost per oz., 18.75¢. All colors tested except lavender stained in perspiration tests. Resistance to laundry and sunlight satisfactory.

Utopia (Jas. Lees & Sons Co.). 4 oz., 75¢; cost per oz., 18.75¢. All colors tested except yellow stained in perspiration tests. Resistance to laundry and sunlight satisfactory.

Third Group

(In order of price)

Woolco (F. W. Woolworth Stores). 2 oz., 25¢; cost per oz., 12.5¢. Orange colors stained in washing. All colors tested except light blue stained in perspiration tests. Lavender and blue faded in sunlight.

Pilgrim (S. S. Kresge Stores). 1¼ oz., 25¢; cost per oz., 14.5¢. Wine color

stained in washing. Orange, brown and royal blue stained in perspiration tests. Light and royal blue faded in sunlight.

Quaker (Quaker Yarn Co., NYC). 3¼ oz., 59¢; cost per oz., 15.8¢. Brown color stained in washing. Navy, brown and red stained in perspiration tests. Lavender faded in sunlight.

Superior (Bernhard Ulmann, NYC). 3¼ oz., 65¢; cost per oz., 17.3¢. Lavender, yel-

low, orange, and green faded in sunlight. All colors tested except lavender and royal blue stained in perspiration tests, but were satisfactory in washing.

Amera (National Silk Co., So. Coventry, Conn.). 4 oz., 90¢; cost per oz., 22.5¢. All colors tested except orchid and blue stained in perspiration tests, but were satisfactory in laundry. Royal blue faded slightly in sunlight.

The Docket

Notes on government actions against misleading advertising, false claims, dangerous products

THE following cases are selected from scores of actions taken monthly by the Federal Trade Commission and the Food & Drug Administration.

The Federal Trade Commission has taken action against:

Frostilla Co., Inc. The company agreed to desist from representing, directly or by implication, that the ingredients in *Frostilla Fragrant Lotion* are definitely known to be more costly than those employed in competitive lotions generally, when such is not, in fact, definitely known; that competitive lotions in general leave a sticky or gummy residue; that *Frostilla Fragrant Lotion* excels other hand lotions in general, prevents the nail cuticle from becoming rough or ragged, is effective for every case of parched skin or reddened hands, tones or stimulates the skin or does more than aid in conditioning it; and that it is "the" perfect hand lotion or is most always preferred where hand lotions are tested side by side.

Odorono Co., Inc. The respondent agreed to cease representing in any manner that the results to be obtained from the use of its deodorant, *Odo-Ro-No*, are unqualified, immediate and absolute, as implied by such words and phrases as "no possibility," "insure," "stop," "instantly" and "always." The company further agreed not to publish or cause to be published any testimonials containing representations contrary to the foregoing agreement.

The Food & Drug Administration has seized:

Therapeutic Lamps. Inspectors of the Food & Drug Administration have made their first seizures of therapeutic lamps. The charge was misbranding in that the labels bore false and misleading therapeutic claims. Included in the seizures were: *Samson Therapeutic Lamp*, manufactured by Samson United of Rochester, N. Y., and *Mastercraft Infra-Red Thera-*

peutic Lamp, shipped by Northern Electric Co. of Chicago.

Koenig's Nervine (Koenig Medical Co.). The drug, a bromide remedy, was seized on the ground that it is dangerous to health when used in the dosage and frequency prescribed on the label. As in the case of acetanilid-bromide remedies (see March 1940 Reports), the F&DA has issued no formal notice as to the bromide tolerance permitted, but it is understood that the F&DA believes that a dosage of more than 30 grains per day is dangerous to health. A tablespoonful of *Nervine* contained approximately 20 grains of bromide. The dosage prescribed on the label was one-half to three-quarters of a tablespoonful to be taken three times a day—a daily intake of 30 to 45 grains of bromide.



Do this to keep hands soft and smooth: "Every time I've had my hands in water, I use Frostilla Fragrant Lotion. It does more to keep my skin resilient, refreshed and soft than any other lotion. It keeps the nail cuticle from getting ragged and rough too." Use Frostilla yourself. Made with costlier ingredients, you can feel the difference. 35c, 50c, \$1.00 sizes in U. S. and Canada. Travel size in better 10c stores.



"THE INGREDIENTS

... are not definitely known to be costlier"

CONSUMERS UNION Reports

MEDICAL SECTION

HAROLD AARON, M. D., SPECIAL MEDICAL ADVISER

MEDICAL CONSULTANTS: Dr. Anton J. Carlson—Chairman, Dep't of Physiology, University of Chicago; Past President, American Physiological Society; Dr. Theodor Rosebury—Assistant Professor of Bacteriology, College of Physicians & Surgeons, and School of Dental and Oral Surgery, Columbia University; Dr. Marlon B. Sulzberger—Asst Professor of Clinical Dermatology and Syphilology, New York Post-Graduate Medical School, Columbia University; Editor, *Journal of Investigative Dermatology*.

CU's Medical Consultants give technical advice on matters of medicine which lie within their fields. CU is responsible for all opinions concerning social, economic and public health questions.



Thyroid Preparations

... should never be taken except under a physician's direction. For most people iodized salt is an efficient preventive of a thyroid deficiency

by MORTON S. BISKIND, M.D.

Wine of Marine Plants—This wine cures goiter. . . . In Spring and Summer drink this wine twice a day; in Autumn and Winter three times. When the supply is exhausted, start over again.—Official Chinese Formulary, 1567-73.

Most dried glandular products taken by mouth are worthless in the treatment of disease, or nearly so. But there is one so effective that even, the powerful crystalline substance derived from it—thyroxin—offers little competition to the crude gland itself. This is thyroid, the gland at the base of the neck that controls the rate at which our tissues burn up the body fuels.

Enlargement of this organ, as everyone knows, is called goiter. The presence or absence of a goiter is no necessary index to the activity of the gland. An enlarged thyroid may produce too little thyroxin, a gland of normal size too much.

When the thyroid fails seriously in early life, a condition known as "cretinism" results; in adult life this deficiency causes "myxedema." No more realistic description of cretinism has

been published than Sir William Osler's, written more than 40 years ago:

No type of human transformation is more distressing to look at than an aggravated case of cretinism. . . . The stunted stature, the semi-bestial aspect, the blubber lips, *retroussé* nose, sunken at the root, the wide-open mouth, the lolling tongue, the small eyes, half closed with swollen lids, the stolid, expressionless face, the squat figure, the muddy dry skin, combine to make the picture of what has been well termed the "pariah of nature."

Not the magic word of Prospero nor the brave kiss of the daughter of Hippocrates ever affected such a change as that which we are now enabled to make in these unfortunate victims, doomed heretofore to live in hopeless imbecility, an unspeakable affliction to their parents and to their relatives.

In myxedema the stature is not stunted and the bodily changes are not so marked as in cretinism. The skin thickens, hair becomes coarse and may fall out, obesity occurs, circulation is poor and extremities are cold, mentality is more or less dull and unresponsive.

Both cretinism (if treated early enough) and myxedema can be cured by continuous administration of dried thyroid gland.

These conditions may result from a

lack of iodine in food and drinking water and can often be prevented by supplying small quantities of iodine in the diet. Iodine forms part of the thyroxin molecule; if the thyroid has insufficient iodine with which to produce enough thyroxin, deficiency will occur.

SIMPLE goiter, occurring in persons otherwise normal, is also caused by a lack of iodine. This condition used to be extremely common in certain mountainous areas, in the region about the Great Lakes and in others in which water and soil are deficient in this element. Empirically, it was known for centuries that certain materials such as seaweed and sea salt (which we now know to be rich in iodine) were useful in goiter. But not until 1917, when David Marine and O. P. Kimball demonstrated, in Akron, Ohio, that iodine could prevent goiter in school children, was a concerted effort made to supply the element to those lacking it.

This can be done by adding a minute quantity of potassium iodide to table salt, a procedure suggested more than a hundred years ago by the Frenchman Boussingault. And iodized salt is now available in almost every grocery store. Except in rare instances its use is harmless.

The amount of iodine necessary to prevent goiter is so small that, a few years ago, two manufacturers of three local brands of table salt decided to omit the potassium iodide altogether, without bothering to change their labels. As a result of this little bit of fakery, the metropolis in which this salt was sold (Cleveland) failed to show as great a decline in the incidence of goiter as a nearby town of somewhat greater size (Detroit) blessed with honest-to-goodness iodized salt.¹

There are many cases in which the

¹ O. P. Kimball, *Journal of the A.M.A.*, volume 108, page 860, March 13, 1937. The nationally marketed brands of iodized salt sold in interstate commerce have been found to contain iodine as indicated on the labels, but analysis of many brands sold locally in parts of the Middle West has revealed amounts varying from none at all to $\frac{1}{4}$ or $\frac{1}{2}$ as much as claimed on the labels. A later study in Michigan showed that more than a third of the samples contained less iodide than claimed on the labels though all had an appreciable amount (D. M. Cowie and J. J. Engelfried, in the *Journal of the Michigan State Medical Society*, December 1939).

thyroid is so impaired that it cannot produce enough thyroxin even when it is supplied with iodine. In these, it is necessary to administer dried thyroid or thyroxin itself. Thyroxin, the chief active substance in thyroid, whether given in the pure form or as the dried gland, has far-reaching effects in the body. It speeds up bodily processes—given in proper amount when it is lacking it may restore under-functioning tissues to normal; in excess, it may cause extreme nervousness, fast heart, loss of weight, and other distressing and dangerous symptoms.

THYROID should therefore never be taken except on the advice and under the supervision of a physician, who can determine if it is necessary and can watch for signs of overdosage. The unsupervised use of thyroid in weight-reducing nostrums (against which the Federal Government has recently acted under the new food, drug and cosmetic laws) has caused serious illness and death. Among well-known reducing products that have contained thyroid are *Marmola*, *Faid* and *Re-Duce-Oids*.

A substance with such broad effects as thyroid naturally may be expected to change in some measure the functions of practically all the organs of the body, including those of other endocrine glands. The drug houses have taken advantage of this fact by including thyroid in more than half the innumerable so-called "pluriglandular" products they market. These are mixtures of various dried glands proposed for an unbelievable variety of diseases. With few exceptions, in those preparations that do have any effect at all the thyroid is the chief, often the only, active ingredient.

Not only does the person who swallows these mixtures pay for a lot of dried organs he can get along very well without, but he is often carelessly exposed to the effects of the thyroid component, in conditions for which it is not indicated, without adequate safeguard against overdosage.

Thyroid is one of the most valuable—and most powerful—of all glandular substances. Used expertly when indicated it may be highly beneficial; used carelessly without medical guidance it may be extremely dangerous indeed.

Vitamin C

... is present in large amounts in fresh fruits and vegetables. Ascorbic acid and multiple vitamin preparations also supply the vitamin—but more expensively

POUULTY, swine and cattle manufacture their own vitamin C, but man apparently cannot. He must get his daily quota from food, and when he doesn't, several things happen. Resistance to infection is reduced. The walls of the capillaries weaken and break easily, causing the appearance of small hemorrhages under the skin and in the joints and the bone sheaths. The gums swell and bleed easily and become susceptible to infection; some cases of "pyorrhea" may be actually due to vitamin C deficiency; teeth may loosen. Finally, wounds heal with difficulty.

These are the symptoms of a severe ascorbic acid deficiency. Many nutritionists believed that milder deficiencies are much more common and may affect health without obvious symptoms.

As with the other vitamins, however, there is no agreement about the minimum or optimum requirements for vitamin C. The amount of vitamin C that will not only prevent scurvy and disorders of teeth, gums, and blood vessels, but also will promote the most vigorous health and provide the maximum resistance against infections is not known. The normal adult apparently needs about 75 to 100 milligrams of ascorbic acid; pregnant and nursing mothers need more; children seem to require about 50 to 100 milligrams for best health. These are daily requirements.

Vitamin C is present in large amounts in the fruits and vegetables; and it should, therefore, be very easy to satisfy the daily requirements. The infant's requirements can be met by breast feeding alone, provided the mother is taking a generous allowance of vitamin C, but it is probably advisable to supplement breast feeding with orange juice after the first three or four weeks. Pasteurized milk has little of the vitamin, but the addition of orange juice to the milk of the artificially fed infant will meet all its requirements.



TAKE YOUR CHOICE

An average-size orange costs 2-3¢, yields 40-50 milligrams of vitamin C. A 50-milligram Squibb ascorbic acid tablet costs about 4¢; two Vi-Penta capsules, yielding 50 milligrams of vitamin C, cost 7½¢

As the table below indicates, the citrus fruit juices are excellent sources of vitamin C.

APPROXIMATE AVERAGE MILLIGRAMS OF ASCORBIC ACID IN VARIOUS JUICES PER 4 FL. OZ. (½ DRINKING GLASS)¹

Orange juice, fresh.....	50
Orange juice, canned.....	45
Grapefruit juice, fresh.....	40
Grapefruit juice, canned....	30
Tomato juice, fresh.....	30
Tomato juice, canned.....	25
Pineapple juice, fresh.....	25
Pineapple juice, canned....	10
Lemon juice, fresh.....	60
Lime juice, fresh.....	30
Sauerkraut juice.....	0 to 5
Vegetable juices, canned....	0 to 5

Berries, apples, bananas, green peas, potatoes, onions, kohlrabi and turnips, although containing less vitamin C, are good sources if eaten daily.

¹ Table based on figures given by Dr. O. A. Bessey in "The Vitamins," a symposium of articles published by the American Medical Ass'n, Chicago, 1939.

Thus the requirements of the normal adult (about 75 milligrams) are easily met by drinking one tumblerful of fresh orange juice or two to three tumblerfuls of tomato juice.

But vitamin C is also present in abundance in other fruits and vegetables, particularly the green leafy vegetables. Therefore, the eating of a variety of vegetables and some fruits will easily insure an adequate vitamin C intake.

TO OBTAIN the most from fruits and vegetables certain properties of vitamin C should be kept in mind. It does not keep as well as the other vitamins. Vegetables, therefore, should be purchased in as fresh a state as possible and should not be held too long before cooking. Maturity of the fruits and vegetables, and duration and temperature of storage affect vitamin C content, but consumers have no control over these factors before foods reach the table. Foods kept in cold storage will keep their vitamin content longer than those kept in ordinary storage.

The water in which vegetables are cooked may contain sufficient oxygen to destroy most of the vitamin. This has led to the practice of starting the vegetables in boiling water. Addition of soda bicarbonate also tends to destroy the vitamin. Acid foods, such as tomatoes or citrus fruits, maintain their vitamin C content during storage, cooking or canning better than non-acid foods.

Vitamin C, like the B vitamins, is soluble in water. Therefore it is advisable to cook vegetables in the smallest amount of liquid possible and to serve the pot liquor in sauce, gravy or soup.

In general, the vitamin C requirements will be best assured if fruits and vegetables are used as soon after marketing as possible, if some are served raw each day as fruit juice and salad, if vegetables are started in boiling water and "quick cooked" and if all vegetable and fruit juices drawn out in preparation are served in one way or another.

The effect of modern canning and processing on the vitamin content of fruits and vegetables is a controversial subject. According to the Bureau of Home Economics of the U. S. Dep't of Agriculture:

The chief loss in nutritive value during the canning of fruit juices is the reduction of vitamin C content. This loss varies from product to product, depending upon the method used. Canned grapefruit juice probably contains 80% to 95% of the original vitamin C. Certain brands of tomato juice may contain almost as much vitamin C as the fresh tomatoes. On the other hand, certain other brands may be almost useless as sources of this factor.

Vegetables suffer considerable loss of vitamins and some loss of mineral material during canning.

Quick freezing has practically no destructive effect upon the vitamin content of foods. In preparing frozen food for the table, the vitamin content will be best protected if the food is plunged in the frozen state into hot cooking water without allowing it to thaw.

In the past few years various "vegetable extractors" have been placed on the market and exhibited in windows of "health food" shops and "vitamin" cafeterias. The implication in these exhibitions is that you can't get all the vitamins and minerals out of your vegetables unless you squeeze them dry. Dr. Lela E. Booher, Chief of the Foods and Nutrition Division of the Bureau of Home Economics says:

These [vegetable] juices doubtless contain a considerable proportion of the soluble nutrients originally present in the food. This proportion depends in part on the structure of the food and the method of extraction. A real answer could be determined only by testing the nutritive value of a sample of the juice and of a sample of the product before it was juiced. The chemical and biological tests involved are expensive and time-consuming.

One should not lose sight of the fact, however, that many of the vegetables that are suggested for juicing may be used in salads or as raw vegetable sticks. Except for variety in the family meals or to meet the needs of persons who must be on a liquid or semi-liquid diet, there would not seem to be much point in purchasing an expensive mechanical device for juicing raw vegetables.

Vitamins A & D

SINCE the listing of potencies of vitamin A & D preparations which appeared in the February 1940 issue of *Consumers Union Reports*, several drug companies have called to our attention the fact that changes have been made in the composition of their vitamin products. In view of these changes we suggest that purchasers examine statements of potency appearing on the labels of the products they purchase. CU will publish a revised list of vitamin products in an early issue.

As far as the vitamin C content of vegetables is concerned, there is a serious drawback to the use of mechanical extractors, for, as Dr. Bessey points out:

Crushing or bruising of many vegetables . . . causes the liberation of enzymes which in the presence of air catalyze the oxidation [destruction] of ascorbic acid. This is a rapid reaction and may lead to complete inactivation of the injured tissue in a few minutes.

Mechanical or electrical vegetable juice extractors, thus, have no appeal either for the scientific nutrition worker or for the housewife.

Vitamin C or ascorbic acid may be purchased as the pure synthetic product in tablets of 15 to 100 milligrams.² The cost is about 2¢ for each 25-milligram tablet. Thus 100 milligrams cost about 8¢, and 100 milligrams obtained from orange juice cost from 4¢ to 7¢. Solely from the point of view of cost, therefore, it is cheaper to obtain one's vitamin C requirements from fresh fruit juice.

But even if the synthetic vitamin should become cheaper, it cannot take the place of the natural food sources, for, as Dr. Booher and others have stated, "It is absolutely certain that all the essential food factors have not yet been discovered." Fruits and vegetables are excellent sources of vitamin C and minerals, fair sources of the other vitamins (A, B complex, K) and *contain in addition other food factors that have not yet been discovered*. There is, therefore, no known substitute for a steady, well-balanced diet carrying liberal quantities of the protective foods—dairy products, eggs, whole-grain breads, meats, fruits, tomatoes and leafy green vegetables.

There may be rare occasions when fruits or vegetables cannot be eaten or tolerated. The physician may then prescribe the synthetic vitamin C in large doses. But for others, when large amounts of vitamin C are needed, the best source will be the fruit juices and vegetables.

The cheapest synthetic products are the pure ascorbic acid tablets. The "shot-gun" or multiple-vitamin preparations are unlikely to contain more than 25 milligrams of vitamin C per capsule.

² One milligram of ascorbic acid is equivalent to 20 International Units.

GENERAL SECTION

CONSUMER NEWS AND INFORMATION



CU's Fourth Annual Meeting

... will be held this year as part of a two-day consumer conference; here are details of the meeting and the conference, and of the forthcoming election of members for CU's Board of Directors

COMBINING its Fourth Annual Meeting with a general survey of what science is doing in the consumer's interest, Consumers Union will next month hold a two-day conference on the campus of Massachusetts State College at Amherst, Mass.

Theme of the survey part of the meeting, which will be conducted in cooperation with the Boston and Cambridge branch of the American Association of Scientific Workers, will be "Science in the Service of the Consumer." A number of authorities in related fields (see box below) will contribute to the development of this topic at morning, afternoon and evening sessions on June 17 and 18.

CU's Fourth Annual Meeting will be held on the second day of the conference. Reports on the operation and plans of the organization will be made by CU's officers, and results of members' balloting for new members of the Board of Directors (see col. 3) will be announced.

CU's Directors are hopeful that, from this year's beginnings, future Annual Meetings can be made occasions for increasingly comprehensive conferences in the interest of consumers the country over. For this first conference CU is indebted to Massachusetts State College as host; and to the Boston and Cambridge branch of the AASW, which is jointly sponsoring the conference with Consumers Union and contributing to the planning and preparation of the agenda.

CU members who plan to attend the Fourth Annual Meeting and Conference are urged to write to CU for registration cards as soon as possible. The Annual Meeting session will be open to all members without charge; admission to the Conference sessions will be by card, obtainable on payment of \$1. Preparations are being made for special low-cost overnight facilities at Amherst. Complete details will be available before the end of this month, and will be sent by mail to all members ordering registration cards.

Headed nationally by Prof. Anton J. Carlson of the University of Chicago, the AASW was formed "to bring

scientific workers together to promote an understanding of the relationship between Science and Social Problems." The Boston and Cambridge branch, headed by Dr. Kenneth V. Thimann of Harvard, has been cooperating with CU for some time on testing and technical work.

BALLOTS for the election of seven members to CU's Board of Directors will be sent to CU members the middle of this month. The terms of five directors are expiring, and, by amendment of the By-laws, two new vacancies have been created, enlarging the Board to 19 members.

Dexter Masters, Publications Director of CU, has up to now been an ex-officio member of the Board. The By-laws were amended, however, to eliminate ex-officio memberships, in order to give CU members the opportunity to vote on all Directors (with the single exception of the Staff Representative, who is elected by the employees of CU).

In accordance with the By-laws, the present Board has nominated seven persons. Eight other candidates have been nominated by individual members of CU, in accordance with the following provision of the By-laws: "Candidates may also be nominated by petition. Such petition shall be signed by one or more members in good standing."

Nominated by CU's Board

Dr. Jerome Davis (nominated for re-election)—Former President, Amer-

"Science in the Service of the Consumer"

TOPICS to be discussed at the June Conference will cover scientific developments of importance to the consumer, government and private research in the interests of the consumer, and numerous specific subjects, including Diet in Relation to the Teeth, Vitamins, Cosmetics, Automobiles and Textiles.

Among speakers already scheduled are the following:

Anton J. Carlson, Chairman of Dep't of Physiology, University of Chicago, and Nat'l President of the American Ass'n of Scientific Workers;

John M. Cassels, Director of the Institute for Consumer Education, Stephens College, Columbia, Mo.;

Raymond E. Kirk, Head of the Dep't of Chemistry, Brooklyn Polytechnic Institute;

Helen Mitchell, Authority on nutrition, Massachusetts State College;

Donald E. Montgomery, Consumers' Counsel of the Agricultural Adjustment Administration;

Theodor Rosebury, Authority on tooth decay, College of Physicians and Surgeons, Columbia University;

Louise Stanley, Chief of the Bureau of Home Economics, U. S. Dep't of Agriculture;

C. Fayette Taylor, Professor of Automotive Engineering, Massachusetts Institute of Technology;

Gerald Wendt, Director of National Advisory Committees, New York World's Fair 1940.

ican Federation of Teachers; Chairman, Labor's Non-Partisan League of Connecticut.

Dr. Ned H. Dearborn—Dean, Division of General Education, New York University; Vice-President of the American Federation of Teachers.

Paul Kern (nominated for re-election)—President of the Civil Service Commission, New York City.

Dr. Raymond E. Kirk—Head of the Dep't of Chemistry, Brooklyn Polytechnic Institute.

Dexter Masters (nominated for re-election)—Publications Director of Consumers Union and Editor of *Consumers Union Reports*.

Dr. Goodwin Watson (nominated for re-election)—Professor of Education, Teachers College, Columbia University.

Dr. Gerald Wendt—Director of National Advisory Committees for the New York World's Fair 1940.

Nominated by CU Members

Dr. Frank E. Beube—Instructor in Dentistry, School of Oral and Dental Surgery, Columbia University.

Reed Harris—President, Metropolitan Cooperative Council; administrative officer, U. S. Office of Government Reports, New York City.

Professor Leopold Infeld—Professor of Applied Mathematics, University of Toronto; co-author with Albert Einstein of "Evolution of Physics."

Professor Walter Rautenstrauch—Professor of Industrial Engineering, Columbia University.

Leo Rubinstein—Member, Board of Directors, Cooperative Health Ass'n; Editor, *Knickerbocker Village Consumer*.

Harriet Silverman—Executive Secretary, People's National Health Committee.

Morris Watson—International Vice-President, American Newspaper Guild.

Dr. Max Yergan—Instructor in History, College of the City of New York; President, National Negro Congress.

Interstate Trade Barriers

The TNEC has looked into them, and consumers would do well to follow suit—for this war is reaching menacing proportions

IF EACH State were to decide that it was self-sufficient and bar all imports from sister States, the citizens of Maine and Idaho would undoubtedly soon find that they wanted oranges as well as potatoes. Wisconsinites might decide that an abundance of butter and cheese doesn't compensate for a lack of cotton goods, while residents of Michigan would discover that automobiles are of little use without gasoline.

That is the unhappy situation which would exist if the 48 States were to carry through with the theory that has led many of them to adopt laws and regulations intended to protect their own residents, products or enterprises from competition with products or services of other States.

Fortunately, interstate trade barriers are coming in for an increasing amount of attention as shown by the recent hearing before the Temporary National Economics Committee.

A number of trade barriers appear to be consumer-protective measures. As a case in point, seven States have set up egg grades which provide that, regardless of quality, only eggs produced within the State can be classified in the top grade. Selling eggs by grade is highly desirable, but here boosting egg prices and assuring markets for the benefit of local producers would seem to be the main objective.

Georgia, Florida and Arizona go a step farther and declare that only eggs produced within the State can be called "fresh." Thus two-day-old eggs from a neighboring State are denied a quality rating which may be given much older eggs of the right geographical origin.

State grading requirements for fruits and vegetables also may operate as trade barriers. As one example, Montana requires fruits and vegetables to be graded and labeled in accordance with its own standards, which differ from the Federal grades in some respects. Even though a truckload of fruit and vegetables has pre-

viously been graded by Federal inspectors, the truck is stopped at the State border and an inspection made, for which a fee is charged.

Georgia does more forthrightly what some States evidently hope to achieve by their grading requirements. The State Commissioner of Agriculture is empowered by law to prohibit the importation of agricultural products from other States if he considers the local supply to be adequate.

These examples could be multiplied many times. Grading and labeling of goods should be vigorously promoted, but on the basis of quality. To adopt grading as a means of hampering commerce between States works to the detriment, not to the benefit, of consumers; misleads purchasers; and may, if resorted to extensively, discredit honest grading and informative labeling programs. The obvious solution is the adoption by all States of uniform grades.

State quarantine and inspection laws are also used to achieve the total or partial exclusion of agricultural products from other States. California excludes Florida citrus fruit on the ground that it is infected with citrus canker although the disease has been unknown in Florida for some years. The lemon-plant disease has disappeared but this does not deter California from retaining its quarantine upon out-of-State lemons. Florida has used similar measures in retaliation.

The effect of trade barriers—and there are many other types in addition to those mentioned—is to limit competition. Results are higher prices and lower standards of quality, as Frank Bane, Director of the Council of State Governments, has pointed out.

A small group in a State may profit temporarily but in many cases the law works to the detriment of even those it is supposed to benefit since the affected States inevitably retaliate. This in turn calls for counter-retaliation. And it is the consumer who pays the bill for this foolish and uneconomic warfare among the States.

Group Health Plans

... can be adapted to the medical and financial needs of most communities. Here in the second of two articles is an account of three successful plans

by KINGSLEY ROBERTS, M. D.

THE best buy in medicine would obviously be the most efficient type of service at the most economical figure. Last month's article sketched in the general outline of such a service, defining it as a group practice combined with group purchase. But this is only the beginning of the story and there are many factors for the consumer to consider.

For one thing, health plans offered to the public fall into two general categories: commercial insurance schemes and voluntary non-profit groups. Practically none is all-inclusive in scope, but only in some of the non-profit plans are group practice and preventive medicine found. Health insurance companies seem to forget about preventing illness; but the importance of such preventive care cannot be overemphasized.

So far as coverage goes, most commercial insurance policies provide only for cash reimbursements for expenses incurred, within certain limits, while some group health plans make the service itself available. In these plans, which are obviously superior, the benefit is the visit itself. However, even service plans may have a deductible clause, excluding from coverage the first \$5 or \$10 of expense, or there may be a ceiling set, providing services only up to a specified amount or value.

The most important consideration in these plans is the dues or premium structure. If you want good service, you must pay for it and pay a fair price. A doctor cannot afford to take care of you and keep you in good health unless he can make a living at the same time. Where physicians are inadequately paid, they will be obliged either to give the majority of their time to private patients outside the plan or to take onto their panels more subscribers than they can service properly. Thus, a physician instead of

carrying 1,000 to 1,400 patients may be carrying as many as 2,000 to 3,000.

In the early days of experimentation many such evils arose through ignorance rather than through any intentional desire to mislead the public. However, with the rapid growth of all kinds of plans covering many thousands of people, the leaders of group health organizations began to feel growing concern over the lack of any medium for the national exchange of experiences and for the development of standards, and formed, therefore, in 1938, the Ass'n of Medical Cooperatives.



IN WASHINGTON, D. C.

... group practice and group purchase meet at this sign

The Association was dissolved, at a convention held in Chicago last February, to make way for a broader organization, the Group Health Federation of America, established to protect the public and to set standards among the medical service plans. Any plan which is a member of the Federation must meet the basic standards for good operation and good quality of service.

The Federation does not, however, attempt to fix the scope of service in any individual plan. This is entirely dependent upon the needs and desires of the particular group of consumers involved, who may desire to cover themselves for general practitioner care only, for all medical care, not including hospitalization, or for all services. There are many possible combinations with rates varying according to the amount of service.

A brief description of three plans which are charter members of the Federation may give some indication of the possible range of services:

THE Ross-Loos Medical Group, in Los Angeles, serves some 20,000 subscribers and their dependents (over 80,000 persons in all), and has more than 70 full-time physicians on the staff. Besides the main clinic building, there are 10 branch offices in outlying districts.

Medical services include house calls, office calls, diagnosis, and medical and surgical treatment of all kinds either at the clinic or in the hospital. There is no extra charge for eye refractions or for hospitalization. Subscribers receive all services and all supplies, except eye glasses and certain types of hypodermic medicine such as insulin or arspenamine, for their monthly fees.

Dependents of members are required to pay for their own hospitalization or for any supplies or apparatus used in their treatment, such as x-rays, medicines, orthopedic splints, &c. There is also an extra charge to dependents of 50¢ for each office call, \$1 for each residence call, and other small charges for special procedures, such as \$25 for a major operation.

The cost of the services is \$2.50 per employed person per month, if enrolled in groups, or \$3 per month if enrolled as individuals.

A plan somewhat similar in cover-

age, but adapted to rural needs and finances, is the Farmers' Union Cooperative Hospital Ass'n in Elk City, Okla. Here the hospital, managed by a board of five directors elected by members, is the center for all the health services, including clinic and doctor's office. Annual membership rates are for members without dependents, \$12; for members with one dependent, \$18; for a family of four, \$25. In addition, there is a membership fee of \$50, payable \$25 upon application and \$25 the following year.

Medical, dental, and hospital services to the 1,800 families are provided by five physicians and two dentists, who constitute the staff of the Community Hospital. No extra charge is made for consultations, physical or laboratory examinations, surgical operations, or obstetrical care; or for dental examinations, dental x-rays, and extractions. Members and their families are charged \$2 per day for room, board, and general nursing in the hospital; a charge is made for anesthetics and operating room supplies, and for x-rays and home calls.

This plan has had to adapt itself to a scattered rural community and a low-income level. The refinements of the Ross-Loos Clinic, its long list of specialists, and elaborate equipment could not be included at the price the farmers were able to pay. Instead, they receive all basic services, covering their average needs for a very low figure.

STILL another type of setup is the Greenbelt Health Ass'n, Greenbelt, Md., with a membership of over 300 families. Service is rendered by three full-time physicians who have special training in pediatrics, surgery and internal medicine; by a part-time allergist, and a nurse.

The scope of services is defined as "ordinary medical services usually provided by a general practitioner, i.e., services up to the point where in the judgment of the physician the condition of the patient requires the attention of a specialist." Preventive services are stressed by the Association. Fees are charged for obstetrical work, for the first home visit in a given week, and for certain diagnostic and therapeutic procedures.

Each family on joining pays a mem-

Hospital Plans—Additional Information

SINCE the appearance of the articles on the "3¢-a-day" hospital plans and voluntary health insurance, CU has received many inquiries for additional information. Most readers will find their questions answered below:

The location of, and details about, approved non-profit hospital service plans in various communities throughout the United States may be obtained by writing to the American Hospital Association, in Chicago, Illinois.

The Associated Hospital Service of New York City offers maternity hospital care only to families that subscribe through organized groups. In other non-profit hospital service plans elsewhere there may be some elasticity in this provision. Families that cannot join in groups but desire provisions for maternity service (a predictable cost and therefore easier to plan for than emergency hospital expenses) may either subscribe to a private insurance company plan or obtain maternity hospital service at flat rates varying from \$50 to \$100. These rates are fixed by each hospital for semi-private room accommoda-

tions, and do not include payment of fees to the doctor.

The rates for semi-private rooms and board vary. In New York City such charges are about \$5 to \$6.50 a day and are covered by the A.H.S. contract. In other cities it may be \$4 to \$5 a day and the rate of payment to the hospital by the hospital service plan in that area will correspond to that cost.

One of the serious drawbacks to most private insurance company plans is that they have no contracts with hospitals, which the non-profit hospital service plans have. When a subscriber is admitted to a hospital he must pay the full initial deposit, varying from \$50 to \$125, to cover the first one or two weeks' expenses. And only some time after discharge from the hospital, is the policyholder reimbursed up to the amount allowed by the insurance company.

Elderly or middle-aged people who cannot join in groups or who are not accepted by a non-profit hospital service association and who desire voluntary prepayment insurance, may subscribe to a private insurance company plan.

bership fee of \$5 (payable over a period of time) which is used only for capital expenditures. Monthly dues, payable in advance, are: for a family including not more than three children under 18, \$2; for a couple, \$1.50; for an individual, \$1; for each additional child under 18 and for each adult dependent other than husband, or wife, who has passed a physical examination, 25¢.

The problem of health care in Greenbelt demanded a special solution. The whole community comprises not more than 885 families having an average income of approximately \$1,600 a year. In order to provide them with adequate care at a reasonable figure, it was essential to coordinate as many services as possible. This was achieved by cooperation of the Health Ass'n with the Public Health Dep't of the township.

THESE three examples indicate some of the possible types of health associations; additional variations may be found in any of the member groups of the Federation. At the present time these include, besides the three mentioned above, Group Health of Washington; Wage Earners' Health Ass'n,

St. Louis; Trinity Hospital, Little Rock; Milwaukee Medical Center, Milwaukee; Civic Medical Center, Chicago; and the Group Health Ass'n of New York (now in the process of forming itself into a cooperative corporation to be known as Group Health Cooperative of New York, Inc.). The White Cross (Health Service, Inc.) of Boston is a recently formed plan, organized since the establishment of the Group Health Federation and hence not yet a member of the Federation, although it is expected to become one in the near future.

All these plans¹ offer the public a sound method of safeguarding its health without depleting its pocket-book and relieve physicians of a precarious existence, enabling them to spend a due proportion of their time in studies and to keep abreast of the important advances in their particular fields.

¹ CU members interested in these plans should write to the one in their community, or, if there is none, to the Bureau of Cooperative Medicine, 5 East 57 St., New York City. The Bureau will furnish available information on neighboring plans or advise on how to organize a group, for almost any community, however small, can provide itself with group health services.

There Ought to be a Law . . .

by RACHEL LYNN PALMER

Good Housekeeping

HEARINGS on the FTC complaint against *Good Housekeeping* have been resumed after a recess of several months due to the illness of the trial examiner. *Good Housekeeping* is now presenting its side of the case.

Various witnesses for the defense have testified that changes had to be made in advertising copy before it was acceptable to *Good Housekeeping*, that obtaining a Seal of Approval may take time and that *Good Housekeeping* does test the appliances to which it gives its Seal. In fact, said W. J. Russell of Westinghouse Electric, the magazine's Seal means more than the approval of "certain agencies." When pressed by *Good Housekeeping's* lawyer, Mr. Russell identified the "certain agencies" as Consumers' Research and Consumers Union.

Which gives food for thought. Certainly Consumers Union has never considered itself as a competitive rival of *Good Housekeeping* and never suspected that possibly *Good Housekeeping* regarded us as such. We've attributed *Good Housekeeping's* harsh feelings toward CU to the fact that we have at times been a bit incredulous about some of the advertising claims which appeared on the pages of Mr. Hearst's chief money-maker.

Possibly, however, the hostility is rooted in something more fundamental—the belief that CU represents a rival which is competing with *Good Housekeeping* for consumer support. If such is the case, it throws light on the activities of *Good Housekeeping's* Mr. Richard E. Berlin (Executive Vice-president of Hearst Magazines, Inc.) in connection with the Dies "consumer report" which selected CU as its chief target. Mr. Berlin's connection with that report was so cozy that the copies he sent out and the official copies distributed by the Dies Committee were run off from one and the same stencil.

So far as we're concerned, we can't bring ourselves to regard *Good Housekeeping* as a rival—not so long as CU is supported entirely by membership fees, takes no advertising from

the manufacturers whose products it tests, and has as its sole function the protection of the consumer. *Good Housekeeping* looks to us like an animal of a very different nature.

Chains—Pro & Con

THAT the chain stores represent potential monopoly and that they are forcing independent merchants out of business was charged by advocates of the Patman chain-store tax bill at hearings on the measure. Chief among the pro witnesses have been representatives of the National Ass'n of Retail Grocers and of the National Ass'n of Retail Druggists.

Vigorous opposition to the Patman bill on the part of the Dep't of Agriculture was expressed by Secretary Wallace. Admitting that some regulation of the chains is needed "to prevent misuse of bargaining power and to enforce fair methods of competition," Secretary Wallace went on to say: "We think it unwise and unnecessary to give up economies which have been brought by chain distribution in order to prevent certain practices which may not be in the public interest. . . ."

Sugar Bills

SUGAR is far from being a sweet subject these days for the various groups which produce and refine it. In fact, the beet producers, the cane growers (who are themselves divided into factions) and the refiners are all quarreling bitterly with each other because the 1937 Sugar Act expires at the end of 1940, and each group wants a new law devised to further its own special interest.

Chief among sugar bills now before Congress is H.R. 8746, sponsored by Representative Cummings of Colorado, a sugar-beet State. If enacted, it would increase the production of domestic high-cost sugar mainly by making a corresponding reduction in Cuba's allotment under the quota system set up by the 1937 Sugar Act, and would raise the retail price of sugar by about 10%. This would mean adding ap-

proximately \$80,000,000 a year to the sugar bill of American consumers.

The sugar problem has always been settled with a fine disregard for the consumer. It is therefore to the credit of Marvin Jones, Chairman of the House Agriculture Committee, that he did allow one consumer representative (Dr. Ruth Ayres of the American Association of University Women) to testify at the recent hearings on sugar legislation.

Because the consumer representatives were limited to one, CU had to content itself with filing a statement which pointed out, among other things, the criminal folly of enacting legislation which would increase the cost of sugar when nearly one-half of all American families have an annual income of \$1,000 or less.

Walter-Logan Bill

THE Walter-Logan bill which the House recently passed by an overwhelming vote and sent on to the Senate represents a real menace to labor and consumers. If enacted, it would establish a new court in Washington to review orders by Federal boards and agencies and would empower the court not only to review the application of the law but also to review all findings of fact. As a result, the affected bureaus, some 130 in all, would be subject to endless litigation.

Of special concern to consumers, the Food & Drug Administration is among the agencies whose work might be bogged down in a morass of red tape. Noteworthy also is the fact that the Proprietary Ass'n, leading trade association of the patent-medicine manufacturers and one of the chief proponents of the bill, and *Printers' Ink*, the advertising journal, are working to have the Federal Trade Commission—now specifically exempted in the bill—come under its provisions. Counsel for *Good Housekeeping* is said also to be exerting pressure towards this end. Thus the bill may hamstring the two agencies most concerned with consumer protection.

A recent report by the Brookings Institution criticized the Walter-Logan measure for defying "long-settled principles" of judicial jurisdiction and for disregarding "constitutional separation of powers."

Consumers at Work

The Manufacture of Men's Shorts

A supplement to the technical report on page 5

NOT a separate industry in itself, the manufacture of men's shorts is properly a subdivision of the men's cotton garment industry, described briefly in an article, "Labor and the Shirt Industry," in the January 1940 Reports.

The basic problem of the workers in this industry is to achieve a decent minimum hourly rate accompanied by some regularity of employment which will assure the workers of a living annual wage.

The Fair Labor Standards Act (or the Wages and Hours Bill, as it is more popularly known) has been the best guarantee of such a decent minimum that labor in this industry has ever found. Now under fire by anti-labor elements in both Houses of Congress, the Wages and Hours Bill has received the staunch support of all organized labor, both AFL and CIO. And not least interested are the thousands of workers in the men's cotton garment industry who are hopeful that the Wage and Hour Committee recommendation of a 32½¢ an hour minimum for their industry will be finally enacted—if the Wages and Hours Bill is not hamstrung in Congress.

Consultation with both the AFL and CIO unions with jurisdiction over the manufacture of men's shorts indicates that union organization has not yet made much headway. The United Garment Workers of America (AFL) reports that "none of the firms on the list [of brands tested by CU] have agreements with our Organization." And the Amalgamated Clothing Workers of America, CIO, informs CU that all but one of the brands tested are non-union, noting these particularly:

Arrow (Cluett, Peabody & Co., NYC). Non-union; factory located in an apparently company-dominated town. The ACWA reports that one of its organizers was forcibly ejected from the Alabama town in which the company's plant is located, when he announced that he was going to hold a union meeting there.

The company informs CU that it has 7,000 employees, a 32½¢ an hour minimum wage, a sixty-cent an hour average wage and a forty-hour week.

B.V.D. (B.V.D. Co., NYC). The ACWA has members in this company's Baltimore plant which reportedly has 500 employees. Despite the fact that the ACWA has no contract, it has negotiated with the management for the workers in the plant.

Labor in the Refrigerator Industry

A supplement to the technical report on page 7

THERE have been no outstanding changes in labor relations in the electric refrigerator industry since CU's last report in June 1939. A brief summary may indicate current conditions in the industry.

Crosley (Crosley Corp., Cincinnati). The Crosley Corp. informs CU that it has a closed shop contract with the International Brotherhood of Electrical Workers (AFL). 1,100 employees are engaged in the manufacture of electric refrigerators. Their minimum weekly wage is \$22.50, according to Crosley. Insurance, credit unions, vacations, vocational training systems, &c., are supplied by the company management.

Frigidaire (General Motors Corp., Dayton, Ohio). The United Electrical, Radio and Machine Workers of America (CIO), has a local in this company's plant and reports fair labor conditions. The UERMWA anticipates a Labor Board election in the near future to determine the sole collective bargaining agent for the workers in the plant.

General Electric (General Electric Co., Bridgeport, Conn.). Under contract to the UERMWA.

Hotpoint (Edison General Electric Appliance Co., Chicago). This company does not have agreements with any union, according to the UERMWA.

CU's labor notes are published for the guidance of consumers who wish to know the labor conditions under which the products they buy are manufactured. Information is obtained, wherever possible, from both employers and unions in the particular field.

The labor ratings are prepared independently of the technical work and do not in any way affect the technical rating of a product.

Wilson (Wilson Bros., NYC). The ACWA reports that the labor conditions in this company's plants are perhaps the best in the industry. The company is under contract to the ACWA and employs 1,600 workers, an undetermined number of whom are engaged in the manufacturing of men's shorts.

However, almost all the parts used in these refrigerators are made by GE, a union shop.

Kelvinator (Nash-Kelvinator Corp., Detroit). The Kelvinator division of the Nash-Kelvinator Corp. is under contract to the Mechanics Educational Society of America, an unaffiliated union.

Leonard. The Leonard division of the Nash-Kelvinator Corp. has its main plant in Grand Rapids, Mich., and is organized in the United Auto Workers (CIO), which writes that "they are working under contract and their wage rates are comparable to those in the auto industry."

Norge (Borg-Warner Corp., Detroit). The UAW (CIO) reports that this company is organized by the United Automobile Workers of America (AFL).

Sears' Coldspot (Sunbeam Electric Mfg. Co., Evansville, Ind.). This company is unorganized, according to an official of the UERMWA.

Westinghouse (Westinghouse Electric & Mfg. Co., Mansfield, Ohio). The UERMWA has sole collective bargaining rights with the Westinghouse company.

CU has been unable to secure labor information on the other brands rated in this issue.

Your Telephone Bill: III

The complicated relationships among the units of the Bell System make for complicated bookkeeping; and the complicated bookkeeping makes in strange ways for higher telephone bills

THIRD ARTICLE IN A SERIES WRITTEN FOR CU
by MORITZ HOWARD

THE first two articles in this series, dealing with your telephone bill and where the money goes, considered the Bell System as a single entity, and such—from most points of view—it is. For legal and accounting purposes, however, the Bell System is a constellation of more than 200 corporations.

The sun around which the System revolves is, of course, the American Telephone & Telegraph Co. A. T. & T. performs three separate functions. As a holding company, it owns and administers more than 2 billion dollars of the common stocks of its Associated Companies and other subsidiaries. As an operating company, it handles, through its Long Lines Department, most interstate long distance calls of more than 40 miles. As a service company, it supervises and coordinates the financial, legal, accounting, traffic, and other activities of the various operating companies, and performs other services which can more readily be handled by a central agency than by each operating subsidiary separately.

Chief of the planets revolving around A. T. & T. are the 23 Associated Bell Companies among which the local telephone business is geographically divided. Of these 23 Associated Companies, 18 are owned 99% to 100% by A. T. & T.; only two are less than 50% owned. The Associated Companies are bound to A. T. & T. not merely by its ownership of their stock, but also by the "license service contract," under which supervision of the Associated Companies is for the most part placed in A. T. & T.'s hands.

In addition to its Associated Operating Companies, A. T. & T. controls through 99% stock ownership Western Electric, the manufacturing arm of the System. Western Electric and A. T. & T. jointly own Bell Telephone Laboratories, Inc., which performs research for the whole System.

A. T. & T., the 23 Associated Com-

panies, Western Electric, and Bell Telephone Laboratories, Inc., are the major units in the System. But just as in the solar system planets have their satellites, so A. T. & T. subsidiaries in turn have sub-subsidiaries of their own.

One of the Associated Companies, for example, owns stock in 41 other corporations. Western Electric has seven subsidiaries, and one of these, Electric Research Products, Inc. (ERPI, engaged chiefly in the exploitation of moving picture equipment) has 23 subsidiaries of its own. A. T. & T. has one subsidiary to hold title to its building at 195 Broadway, New York, and had until recently another subsidiary to hold title to its building at 205 Broadway. All in all, more than 200 companies are included in the Bell System.

In practice, of course, most of these corporations are mere departments of A. T. & T. The System as a whole is commonly controlled and in most respects operates as a unit. Nevertheless, the legal distinctness of the separate corporations is of vital importance in seeking to understand how the System as a whole is able to balk the efforts of the various State Public Service Commissions to control the profits of each part.

The System's complex corporate structure is a major factor in explaining how, chiefly from 23 Associated Companies whose return is supposedly limited to 6% or 7%, A. T. & T. can reap as much as 16% on its own paid-in capital in an exceptional year, and more than 9% in most years.

The Bell System can and does operate as a unit. But its bookkeeping is different. When it comes to keeping books, A. T. & T.'s interests are best served if it can enter most expense items as expenses of the 23 Associated Companies whose profits are publicly regulated, and can similarly enter most

profit items as profits of those parts of the system not subject to State regulation. Within the Bell System, inter-company bookkeeping has become a fine art, if not a praiseworthy one.

Recent New Deal investigations in other fields have revealed amazing examples of abuses resulting from intercorporate dealing, or the absence of "arms'-length bargaining," within complex corporate structures. Such abuses have appeared in railroad systems, in public utility systems, between investment bankers and the investment trusts which they have sponsored, and between investment bankers and corporations in general.

This article will examine several examples of self-dealing, or absence of arms'-length bargaining, within the Bell System, and the resulting cost to the consuming public.

Rental of Equipment

THE telephone receivers, transmitters, and induction coils in your home or office were not owned, prior to 1927, by your local telephone company but by the holding company, A. T. & T., which rented them to the Associated Companies.

The rental charge was set by contract between A. T. & T. and its subsidiaries. Originally the rental set was 4½% of the gross revenues of each operating subsidiary. Later, A. T. & T. changed its explanation of this 4½% charge, but not the charge. A. T. & T. continued to assess each Associated Company 4½% of its gross revenues, but insisted that only part of this charge was for rental of instruments, the rest being assigned to other services rendered the Associated Companies.

In view of the fact that the rental agreement was between A. T. & T. and companies which it controlled, the question of whether the rental was reasonable is especially significant. The answer depends in part upon how much of the 4½% charge is assigned to rental of the instruments, and how much to other services.

If the whole 4½% charge be considered as a rental payment, as A. T. & T. insisted at one time, then the holding company was earning a profit of about 89% on the money invested in the rented instruments. That is, under the guise of renting the instruments to the Associated Companies, it

was actually extorting the full price of the instruments from them about every 14 months.

Even if later A. T. & T. assertions be accepted that only 2% out of the 4½% payment was for rental of instruments, A. T. & T.'s profit on its investment in the rented equipment averaged more than 28% a year.

If the Associated Companies, which are subject to State regulation, had owned the instruments, their return on the capital invested in them would at least in theory have been limited to 6% or 7%. By means of the intricate intercompany contract, this allowable rate of return was at least quadrupled, and perhaps multiplied 10- or 12-fold. The profits appeared on the books of the unregulated holding company instead of on the books of its regulated subsidiaries.

Sale of Instruments by A. T. & T.

By 1926, two threats to A. T. & T.'s highly profitable rental arrangement were making themselves felt.

More and more, State commissions were beginning to question the justification of the 4½% of the gross revenues which the Associated Companies were paying to their parent, A. T. & T. In 1926, indeed, A. T. & T. reduced the payment to 4%, but this only whetted the appetite of some State commissions for more information and further reductions.

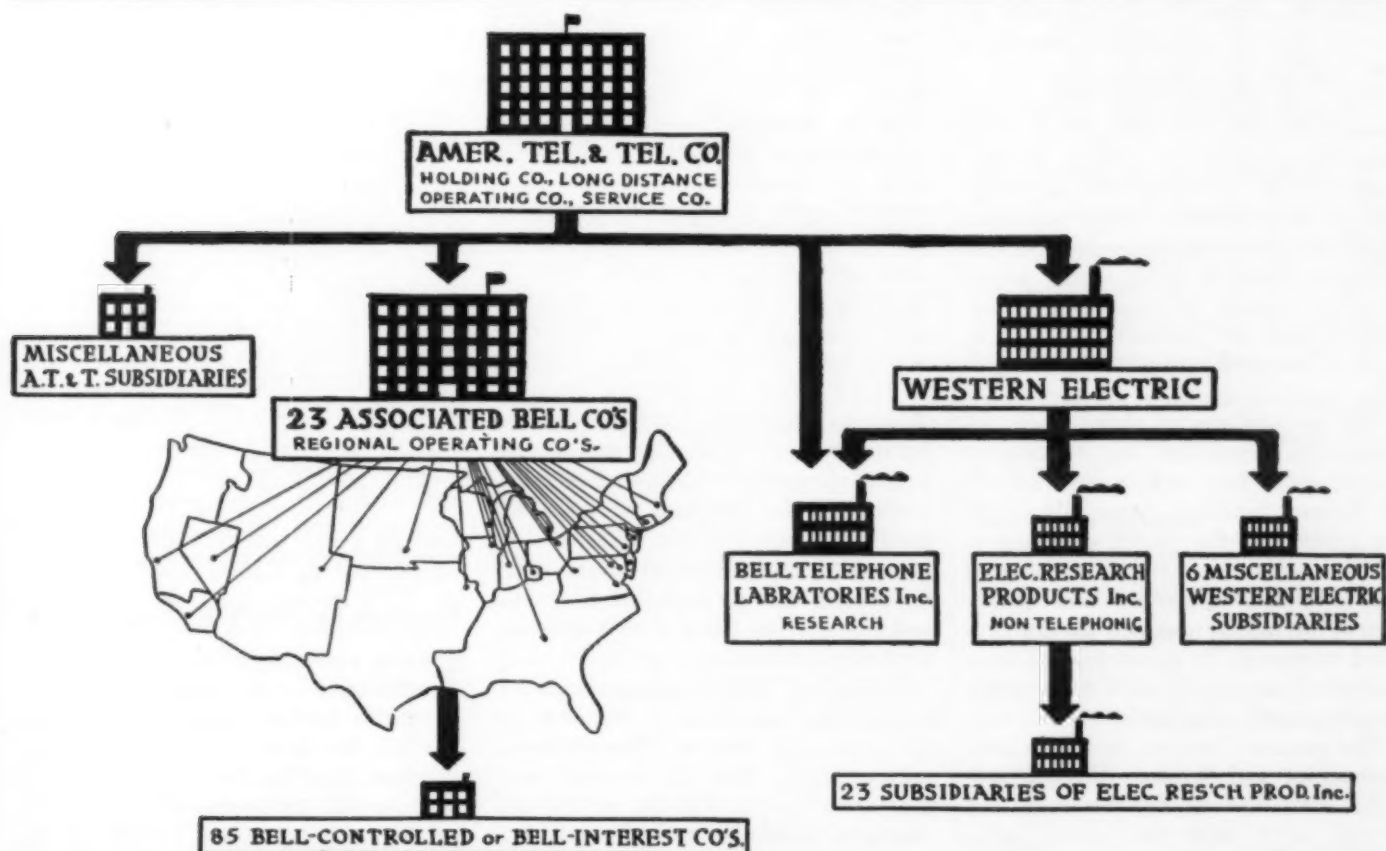
Moreover, the old-fashioned desk sets which A. T. & T. was renting to the Associated Companies at such profitable rates were about to become obsolete through introduction of the new handset type of telephone now in common use. Retirement of the desk sets would result in a large book loss to the owning company; and much new capital would be needed to replace them with new handset models.

On December 31, 1927, A. T. & T. brought its rental business to a close by selling the nearly obsolete instruments to its Associated Companies. The book value of the instruments sold was \$23,576,000. The selling price

was \$38,183,000. A. T. & T.'s net profit was more than \$14,600,000.

Neither the law nor public opinion frowns upon profits. If a willing seller finds a willing buyer who will pay a profitable price, all is well. But this was no ordinary bargain. A. T. & T. and its subsidiaries were not separate individuals bargaining at arms' length. The executives and directors of the Associated Companies who approved the deal were creatures of A. T. & T., removable practically at A. T. & T.'s will. In such cases any profit at all, much less a markup of more than 50% on equipment about to become obsolete, can hardly be justified.

Simultaneously, with the sale of equipment to the Associated Companies, A. T. & T. transferred similar equipment to its own Long Lines Department. In the case of this transfer, nothing was to be gained by inflating the price; hence the Long Lines Department was billed only for the book value—cost less depreciation. A comparison of the prices charged the Long



ANATOMY OF THE BELL SYSTEM

PICTORIAL CHART BY B. TAGAWA

Here is a simplified diagram of the relationships among the more important units of the Bell System. The ways in which intercompany dealings within the System affect consumers are described in the accompanying article

Lines Department with the prices charged the subsidiaries which were subject to State regulation indicates the extent to which the latter were overcharged.

	PRICES CHARGED ASSOCIATED COM- PANIES—REPRODUC- TION COST LESS 20% (1)	PRICES CHARGED LONG LINES— ACTUAL COST LESS DEPRECIATION (2)
Receivers97	.62
Transmitters . . .	1.10	.63
Induction coils. . .	.38	.26

Sales by Western Electric to Associated Companies

WHENEVER your local Bell Telephone Company buys telephone equipment or supplies, the price which it pays affects you in two ways. That price is ultimately recovered from you by means of the depreciation charges which are part of your telephone bill; and a fair return on the amount spent is also charged annually as part of your telephone bill. Thus you as a telephone customer have a double interest in seeing that all such purchases are made at a fair price.

The Associated Bell Companies, however, do not shop around when purchasing. They are bound by contract to buy all equipment and supplies, with negligible exceptions, from A. T. & T.'s manufacturing branch, Western Electric. Even items which Western Electric does not itself manufacture must be purchased through it, with Western Electric acting as jobber.

The possibilities of abuse when two companies controlled by a common parent enter into such a contract are of course limitless, especially when the interest of the parent company is to increase the apparent expenses of the regulated companies and to increase the actual profit of the unregulated company. To guard against such unlimited abuses, the Bell System has two supposed safeguards.

The contract between the Associated Companies and Western Electric provides that Western Electric may not charge more than the lowest price obtainable from its competitors. This safeguard sounds very well indeed; but in practice it is ridiculously inadequate. To enforce it, a special department is continuously engaged in mak-

ing price comparisons between Western Electric and independent competitors. But the department which makes the comparisons is not a department of the Associated Companies, whose interest it supposedly is to buy as cheaply as possible. The comparisons are made by a department of A. T. & T., which profits most when apparent Associated Company costs are high and actual Western Electric profits are high.

To add a touch of the grotesque to this portrait of the lion guarding the lambs, A. T. & T. actually charges the cost of maintaining this price-comparison department back to the Associated Companies, as part of the annual service charge which they pay.

When impartial FCC investigators made their own price comparisons to check up on those made by A. T. & T., they found that in many specific instances Western Electric prices were far higher than those available from independent manufacturers.

For example, magneto switchboard equipment for which Western Electric charged \$1,002 could be procured from Kellogg for \$726, a saving of 28%. Manual common battery switchboards for which Western Electric charged \$221,000 installed were obtainable from Stromberg-Carlson for \$176,000 installed—a saving of 20%.

A. T. & T. has bitterly challenged the fairness of these FCC price comparisons. Whether or not A. T. & T. criticisms are in any way justified, the price comparisons made by A. T. & T. are subject to even greater criticism. A. T. & T. often compares, for example, Western Electric's price for an assembled instrument with the sum of the prices charged by independent competitors if the hundreds of parts are purchased one by one. This is like comparing the delivered price of a *Ford* with the price of a *Chevrolet* assembled from parts procured at repair shop prices.

Even if A. T. & T. comparisons are accepted at face value, it is small cause for pride that Western Electric prices are not higher than independent manufacturers' prices. For the natural advantages which Western Electric has as sole supplier of a vast integrated system should result in prices far lower than those charged by independents.

Western Electric need not procure

customers through advertising or send out salesmen, for its customers are bound to it by contract. It has no credit losses, for the Bell System's credit is unequalled. As part of that System, Western Electric can secure working capital at the lowest rates. It need not manufacture different models for different companies, since the equipment used by its customers is standardized throughout the system. It has full knowledge of the future needs of its customers, and participates in formulating their purchase programs; hence it need never produce anything in excess of the demand, nor need it be caught without stock of a popular item.

Above all, Western Electric has the tremendous advantages which come from mass production. It sells more than 93% of all telephone equipment; the remaining 7% is split among six competitors. Where Kellogg or Stromberg-Carlson must produce intricate assemblies one at a time, Western Electric can turn them out by the hundred or by the thousand; and it can turn out standard equipment in quantities of a million or more.

A. T. & T. makes much of these natural advantages when defending Western Electric to the public and to State regulatory commissions. The advantages are real enough; but they redound to the benefit of neither the Associated Companies nor consumers. Even if A. T. & T.'s price comparisons be accepted at face value, Western Electric prices on many items are not as much lower as its natural advantages would suggest. And if, as is likely, the FCC comparisons are the more accurate, then Western Electric prices are in many instances substantially higher than those of independent manufacturers, in spite of Western Electric's manifold natural advantages.

Western Electric's Pricing System

PRICE comparison is only one of the two safeguards which supposedly guarantee the reasonableness of prices charged the Associated Companies by Western Electric. The other safeguard is supposed to be Western Electric's pricing system, which is said to fix prices by adding a reasonable profit to actual manufacturing costs.

To check on costs, accountants must prepare a host of reports—as many as 3,470 different *kinds* of reports in a

single year. Many reports must be prepared weekly or monthly, so that as many as 69,590 reports have been prepared per year. Many reports must be sent to more than one supervisory officer; so that actually 432,608 copies of reports have been made per year. Such a profusion of "paper-work," performed by thousands of employees at a cost of millions of dollars, is not for the system as a whole, or even for Western Electric as a whole. It is for the manufacturing department of Western Electric alone.

Despite the 432,608 copies of reports in one year, Western Electric officials were frank to confess that they have no notion of what the actual costs of producing various items are. Thus Western Electric's general commercial accountant testified in a Baltimore rate case: "We have no record which will give us the actual cost of any isolated item of our products. . . ." When pressed for an answer on specific costs, he stated: "... The latter question presupposes we know the actual manufacturing cost of each of these individual items. That is not a fact. We do not know. . . ."

To employ thousands of accountants to prepare tens of thousands of reports at a cost of millions of dollars without finding out what specific kinds of products cost might appear to be the performance of madmen.

But there is method in A. T. & T.'s madness. If costs are ascertained, profits can be ascertained, and the reasonableness of prices charged the Associated Companies can be ascertained. A simpler, cheaper cost accounting system might procure these results. As a system for *hiding* true costs, Western Electric's cost accounting system probably has few peers.

Despairing of determining Western Electric costs through the company's own cost-concealing records, FCC investigators made their own cost calculations. A. T. & T. criticisms of these FCC cost-findings may be justified in some cases; more probably they are not. In some instances, even laymen innocent of accounting knowledge can follow the FCC argument. One example should be sufficient.

Among the materials used in manufacturing telephone pay stations are tin, carbon black, paraffin and sulfur. These are purchased by Western Electric at one price; but they enter into

"standard cost" calculations at another price. Thus tin bought in 1933 by Western Electric at an average cost of 37½¢ per pound was included in standard cost calculations at 65¢ per pound. Carbon black purchased at 10 pounds for a nickle entered standard costs at less than five pounds for a nickle. The markup on paraffin was 76%, on sulfur 43%.

The so-called "standard costs," calculated on the basis of such inflated figures, do not give the price which Western Electric charges the Associated Companies. Selling price bears little relation to the standard complete costs thus calculated. Thus the selling price of one type of switchboard varies from 27% to 175% in excess of the standard cost; in machine-switching equipment the excess runs from 46% to 168%; in substation apparatus, from 5% to 218%.

As noted, excessive Western Electric prices to Associated Companies result in inflated bills to telephone consumers. That the absence of arms'-length bargaining in Associated Company purchases does result in excessive prices, the FCC investigation has conclusively established. Following thorough study, the "Proposed Report" by Federal Communications Commissioner Paul A. Walker reaches this conclusion:

If the Associated Operating Companies were required to fill their needs for telephone apparatus and equipment by competitive bidding among telephone manufacturers . . . a reduction in prices of telephone apparatus and equipment by nearly 40% below the present Western Electric price level [could confidently be expected].

But competitive bidding is anathema to the Bell System, as to many other complex corporate structures. A. T. & T. prefers to deal with its subsidiaries, and to cause its subsidiaries to deal with one another. The cost to the consumer is indicated by the rough calculation that a 40% cut in Western Electric prices would give rise to a 12% cut in Associated Company expenses, with a resulting drop in your telephone bill.

(The next article in this series will describe some of the difficulties faced by State regulatory commissions, and by consumers, in their efforts to limit the telephone monopoly to a legal rate of return.)

It's SPRING

The time to multiply.

Birds, bees and flowers do it . . .

Why not CU members?

Have you any notion how easy it is

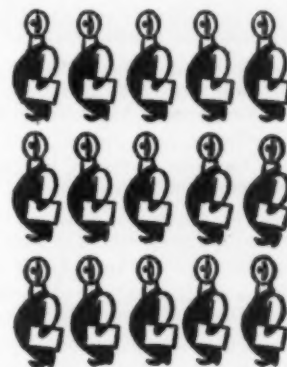
for one CU member



or two CU members



to grow into 15 or more CU members?



Try talking to your friends—
the results will amaze you.

CU is almost irresistible at any time.

But in the Spring . . .

and at the reduced group rates
for 15 or more members . . .
your friends will thank you
for giving them the chance
to join.

Here's the coupon.

.....

CONSUMERS UNION

17 Union Square West, N. Y. C.

Please tell me about the low group rates, and
Send me circulars to give my friends.

NAME

ADDRESS

.....

ORGANIZATION SCUGO

News and Information • 33

CONSUMERS UNION
17 Union Square W., N. Y. C.

Please send me information about
CU's Life Insurance Advisory Service.

NAME

ADDRESS

.....SLIAO

CONSUMERS UNION
17 Union Square W., N. Y. C.

I am enclosing \$....., for which
please send me the material I have
checked below:

- ☐ "Good Health and Bad Medicine,"
by Harold Aaron, M.D.—Price for
CU members, \$1.50.
- ☐ "Our Common Ailment," by Harold
Aaron, M.D.—Price for CU mem-
bers, \$1
- ☐ Special Combination Offer: "Good
Health and Bad Medicine" plus
"Our Common Ailment"—both for
\$2.25
- ☐ "Life Insurance: Investing in Disaster"
—Price for CU members, 60c
- ☐ "The Photographic Buyers' Hand-
book"—Price for CU members,
\$1.50
- ☐ "Wines & Liquors," 1940 edition—
50c (Not knowingly sold to minors)
- ☐ "Feminine Hygiene"—25c (Please
initial the following statement if
ordering this report: I am married
and use prophylactic materials on
the advice of a physician.....)
- ☐ "Millions on Wheels"—Price for CU
members, \$1.25
- ☐ "False Security," by Bernard J. Reis,
—Price for CU members, \$1.40
- ☐ Bound Volumes of the Reports—
1936-37 (\$2.50), 1938 (\$2.50),
1939 (\$3)

NAME.....

ADDRESS

.....SSPO

CONSUMERS UNION
17 Union Square W., N. Y. C.

I am enclosing \$3.50 for which

- ☐ Enroll me as a member of Consumers
Union for one year.
 - ☐ Renew my membership in Consumers
Union.
- I agree to keep confidential all material
so designated.

NAME.....

ADDRESS

.....SCUO

War & Prices

*Ninth of CU's special reports on the
effects of war on prices & products*

GERMANY's invasion of Denmark and Norway marked the beginning of a new and more destructive phase of the war. It is still too early to measure the effect of these developments on the prices consumers pay, but speculative increases in the wholesale prices of a number of commodities give some indication of what consumers may expect.

Denmark supplied about half the pork products and eggs and about a fourth of the butter consumed in Great Britain. Expectations that Great Britain would now turn to us brought rapid increases in the quotations on a number of foods, particularly pork, which rose nearly 50% in the second week of April.

Norwegian and Danish ships bring most of our sugar from Cuba and much of our cocoa, rubber and tin from South American and the Far East. This trade has been interrupted by uncertainty regarding the status of these vessels; and, until British authorities and Danish and Norwegian owners reach an agreement, higher prices will be charged for some of the commodities which these vessels carried.

About half of our total requirements for wood pulp are filled by imports, some of which are in the form of newsprint, and the rest, pulp and pulp wood. Nearly all these imports came from the Scandinavian countries and Canada. With Great Britain, the second largest consumer of pulp, also cut off from Scandinavian supplies, it will be a seller's market for producers in the United States and Canada. Already, prices of various grades of pulp have risen 5% to 20%, and the securities of leading pulp and paper manufacturing companies which have risen from 12% to 49% now join the ranks of "war babies."

These speculative price increases reflect expectations that:

(1) Great Britain will buy from us goods she can no longer buy from Scandinavian countries;

(2) Scandinavian ships will no longer be available to carry our commerce;

(3) Our imports from Scandinavian countries will be cut off.

Some of these expectations may not be fulfilled. It is certain, for example, that Great Britain will buy as much of her food as possible from Empire sources in order to conserve her foreign exchange for purchases of war materials. During the first six months of the war our exports of foods as a whole were lower than in the corresponding period a year ago, and the big increases have come in cotton, steel, and aircraft.

It seems unlikely that European demand or lack of shipping facilities will cause much of an increase in retail prices of food. Some individual commodities, however, like pork, soy beans, dried beans, and canned vegetables, that have a large wartime demand may increase in price, while other foods, like fresh fruits and vegetables, will not be affected, or may even decline because of smaller exports.

The paper and pulp situation seems more likely to be lasting, since it is clear now that our paper and pulp requirements must for some time be filled more largely than before by domestic producers. Price increases in paper products are likely to pass unnoticed by consumers because few people know what the price of a particular brand of writing paper, for example, is, and because the cost of many other kinds of paper is included in the price buyers pay for the goods which the paper is used to box or wrap.

1940 Buying Guide

THE 1940 Buying Guide Supplement will be sent to CU members, along with their ballots, around the middle of May. The supplement summarizes reports which have appeared since publication of the 1939 Buying Guide. It will be followed, late in the year, by the full 1941 Buying Guide.

CONSUMERS UNION Reports

Quote Without Comment

"Speaking of essential raw materials, defense authorities at Washington have become converted to the Wagner Health bill. Recruiting offices re-

port that nearly three out of four American citizens applying for enlistment in our armed forces are rejected for physical disabilities. During the World War draft the percentage of rejects was much lower—less than one out of three. Granting that in time of peace the Navy and Army can afford to pick and choose, while in time of war the tendency is to enroll all but the more obvious cripples, this national health situation is a major defect in our national defense. As the Athenian general told his men at Syracuse 2,400 years ago, a city consists of men, not of fortifications and ships without the troops to man them."—*Jay Franklin, in the New York Post.*

"Last month we sold Mrs. Jones our 'Coldfood' electric refrigerator *Itself* and the *Convenience*. This month we'll give her our *irresistible* reason why she should buy it. . . .

"So, with our heads together (but not too close together), we merely add the monthly cost of the box to its cost of operation, and then deduct her monthly ice bill (year-'round average) plus what she'll save on her food bill each month—which we compute. . . .

"You know as well as I do that we can manipulate our figures in such a way that, no matter how little Mrs. Jones spends for ice, we can have her *saving* money, actually *decreasing* her budget by buying the box—by merely using an exorbitant saving-on-food-bill figure. . . .

"We open several of our many catalogs. One of them states that the saving, for a family of five, will average about \$10 a month. Another claims a saving of about \$2 a week.

"See that, Mrs. Jones?" we wave. 'Gross exaggerations. That's why I don't *use* those figures. I wouldn't try to make *anybody* believe that, much less an intelligent woman. . . .

"(Sorry, manufacturers, but Mrs. Jones, and every other woman I ever talked to, thinks your figures are exorbitant. And if we can convince them that *our* figures are right—and do it *best* by piously squawking about how high *your* figures are—you don't mind, do you?)

"Of course, it's only natural. They make the boxes, and they want to sell them. But I don't use their figures. I'm using Government figures. They were included in a survey that had something to do with the Pure Food Laws.' (They weren't, but Mrs. Jones won't look it up.)

"Now, after all, Mrs. Jones, the Government doesn't care whether you buy a box or not. So when I tell you that the saving, for a family the size of yours, will average about 87¢ a week, you can be pretty sure that my figures are right."—*From "The Irresistible Sales Talk," an article by Caswell Oden in RADIO RETAILING.*

"Recently the FTC, in accounting for a new appropriation, disclosed as a new project a proposal to delve into the methods and cost of distribution. Snap went the trigger: the self-appointed champions of advertising's purity went into hysterical action. One called the proposed investigation an inquisition. Another shouted that this was 'another attack on advertising,' an attempt to muffle the press, to destroy the freedom of the printed word.

"Why this rush to the defense against a fact-finding economic study covering, among all the other costs of distribution, advertising? What justifies this guilt neurosis? Why the beating of drums and waving of flags? To borrow from Shakespeare, I believe we do protest too much."—*From an address by Arthur Price, of the advertising department of Sears, Roebuck & Co., before the Washington Advertising Club; as quoted in PRINTERS' INK.*

SPECIAL REPORTS and BOOKS AVAILABLE TO CU MEMBERS

Both for \$2.25

The response of Consumers Union members to these two books—both written by Dr. Harold Aaron, CU's Special Medical Adviser—has been exceptional. "Our Common Ailment," Dr. Aaron's first book, provides laymen with an intelligent approach to the treatment of constipation. "Good Health and Bad Medicine," his new one, will help them cut through the claims of patent medicine manufacturers and apply to their own special health problems the best of present-day medical knowledge.

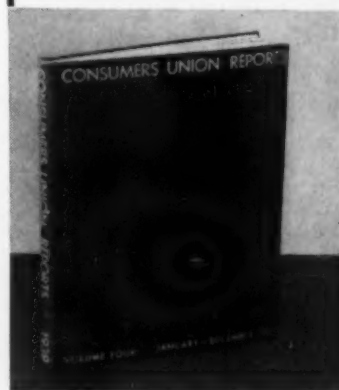


"The Photographic Buyers' Handbook"

Only 135 copies of the CU edition of this unusual book remain. They will be sold—first come, first served—at the CU member's price of \$1.50 until the edition is exhausted. Published a year ago, the *Handbook* answers hundreds of questions that puzzle the average photographer about cameras, equipment, enlargers, developers, &c. Some of the ratings are out of date; but the bulk of the information contained in the book will still be highly helpful to the photographer-in-the-marketplace. *No more copies will be available after the current stock is sold.*

Bound Volumes of the Reports

Designed especially for CU members who want to keep the *Reports* for permanent handy reference,



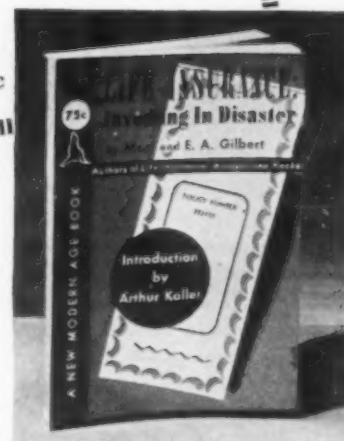
these volumes are handsomely bound in hard board with colored cloth and stamped in white. Each contains a complete index. They are particularly well suited for libraries and for teachers. In three volumes: 1936-37 (18 issues), 1938 (12 issues), and 1939 (12 issues).

USE ORDER FORM ON PAGE 34

Of all ordinary life insurance policies that terminated in a recent 10-year period, only a little over 7 per cent matured as death claims... 31 per cent terminated by lapse... and 23 per cent by surrender!

"Life Insurance: Investing in Disaster" may be ordered from CU by CU members at the specially reduced price of 60c

ARE YOU GETTING YOUR INSURANCE MONEY'S WORTH?



UNFORTUNATELY, as the statistics above (and numerous others) demonstrate, most people who buy life insurance are *not* getting their money's worth.

For this reason, and in the belief that consumers need quite as much reliable and unbiased information when they buy insurance policies as they do when they buy any other product, Consumers Union offers a Life Insurance Advisory Service at exceptionally low rates.

The fee for general insurance counsel is \$5. Fees for specific recommendations and analyses of policies are \$1.25 per \$1,000, with a minimum charge of \$5. (These rates apply only for CU members; rates for non-members are \$2 per \$1,000, with a minimum charge of \$10.)

At the head of CU's Insurance Advisory Service is E. A. Gilbert, well-known insurance analyst, co-author of "Life Insurance: Investing in Disaster," a comprehensive and penetrating survey of the insurance business.

If you are not sure that your insurance policy is accomplishing the things you want—if you have any doubts at all about your policy and the amount and the cost of the coverage it affords—if you do not now have a policy and want to fit one to your needs... why not make use of CU's Life Insurance Advisory Service?

For information on CU's Life Insurance Advisory Service and for copies of "Life Insurance: Investing in Disaster"

USE ORDER FORM ON PAGE 34